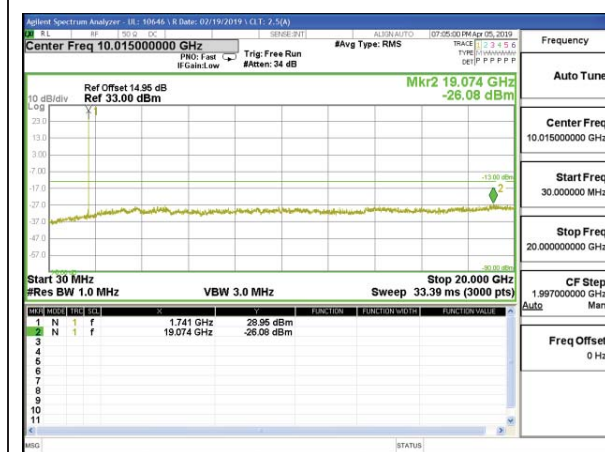




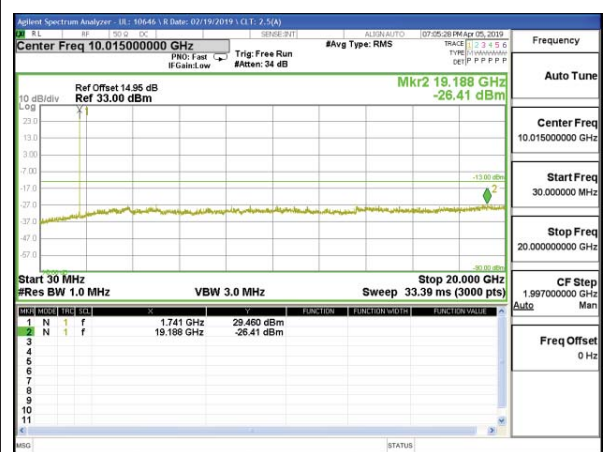
LTE B66 3MHz QPSK Low Channel RB1-0



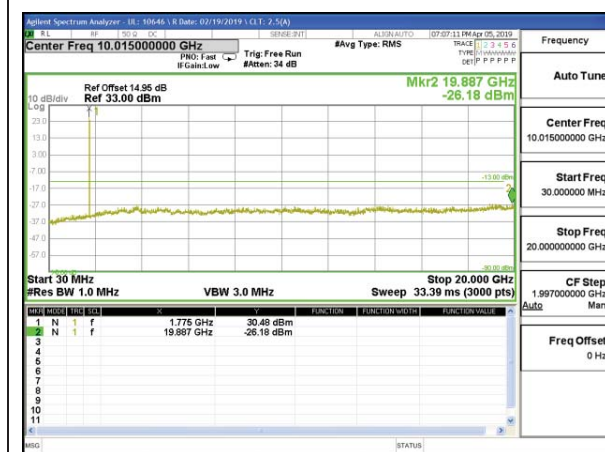
LTE B66 3MHz 16QAM Low Channel RB1-0



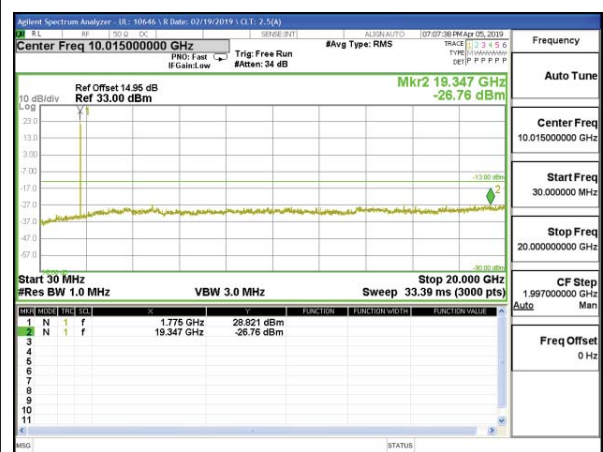
LTE B66 3MHz QPSK Middle Channel RB1-0



LTE B66 3MHz 16QAM Middle Channel RB1-0



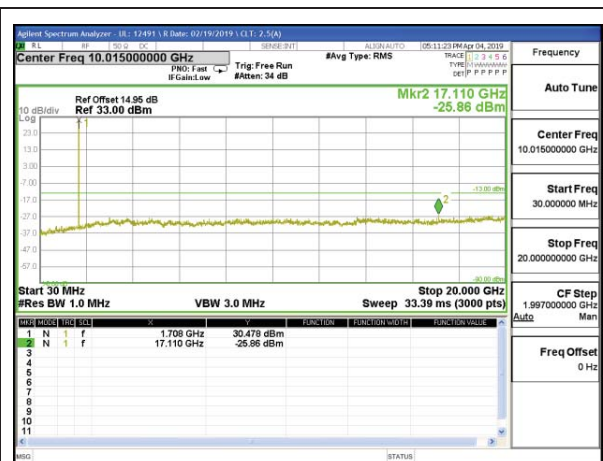
LTE B66 3MHz QPSK High Channel RB1-0



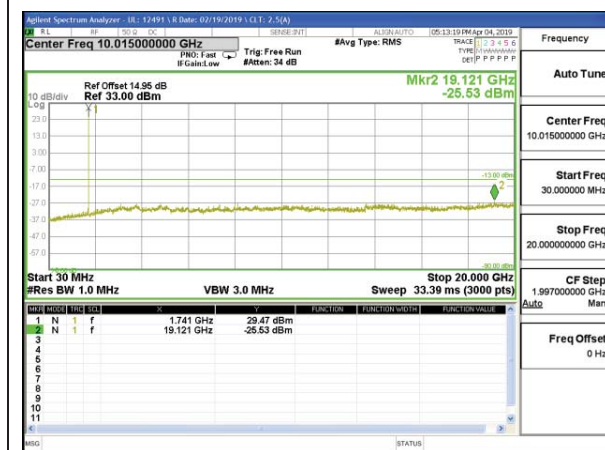
LTE B66 3MHz 16QAM High Channel RB1-0



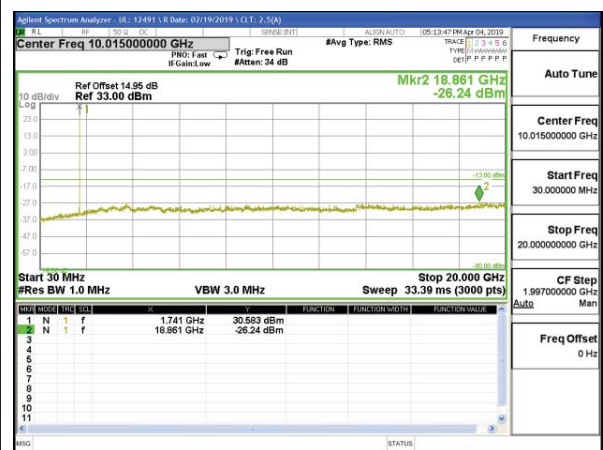
LTE B66 5MHz QPSK Low Channel RB1-0



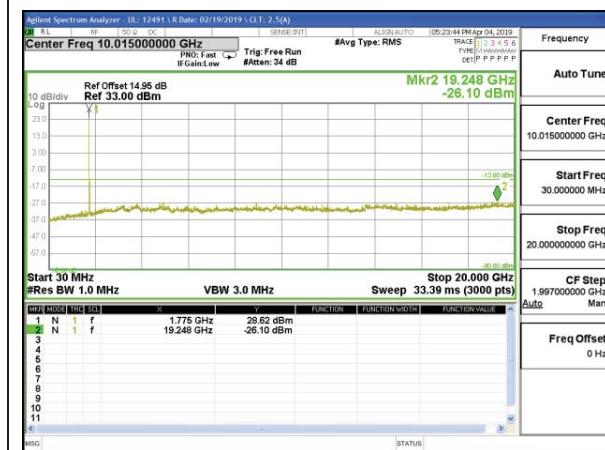
LTE B66 5MHz 16QAM Low Channel RB1-0



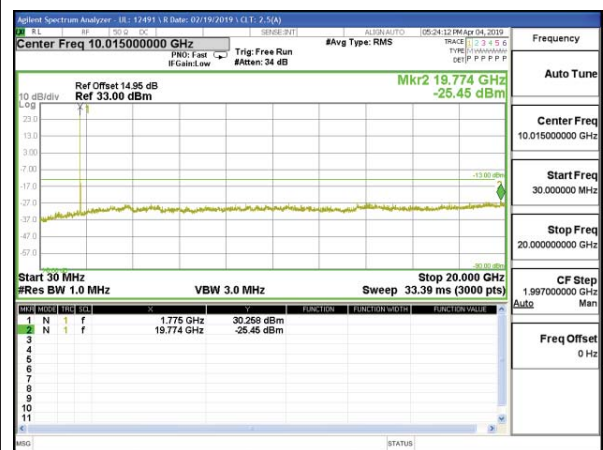
LTE B66 5MHz QPSK Middle Channel RB1-0



LTE B66 5MHz 16QAM Middle Channel RB1-0



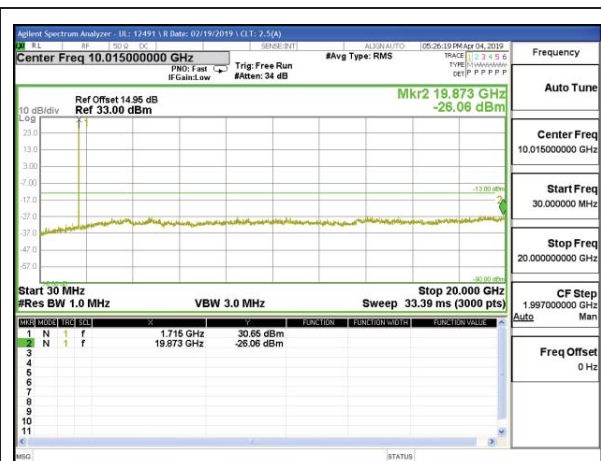
LTE B66 5MHz QPSK High Channel RB1-0



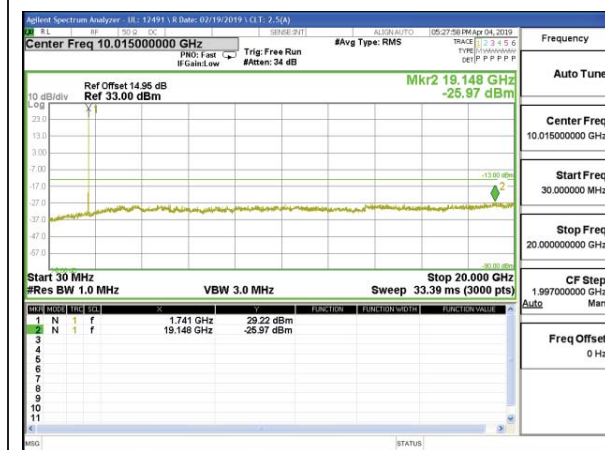
LTE B66 5MHz 16QAM High Channel RB1-0



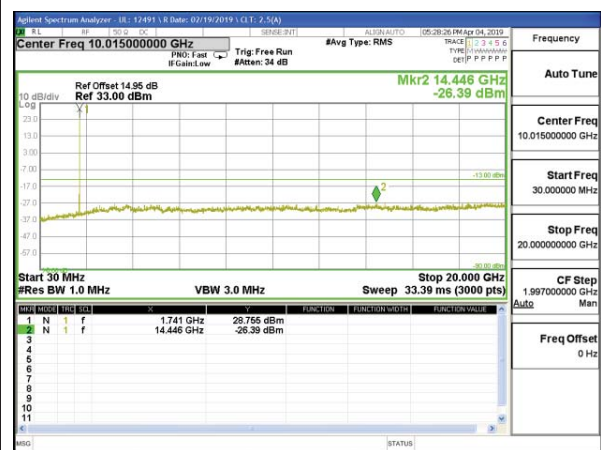
LTE B66 10MHz QPSK Low Channel RB1-0



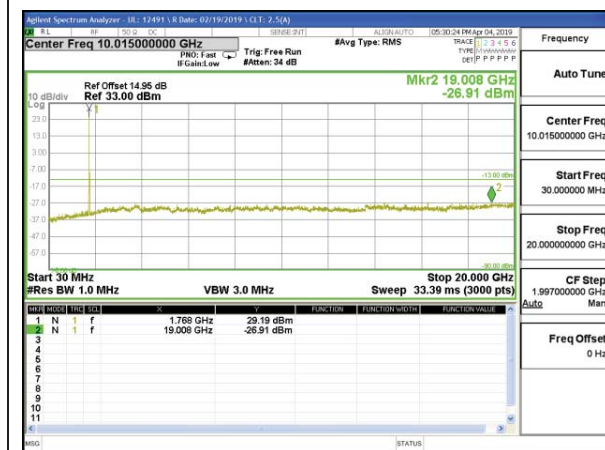
LTE B66 10MHz 16QAM Low Channel RB1-0



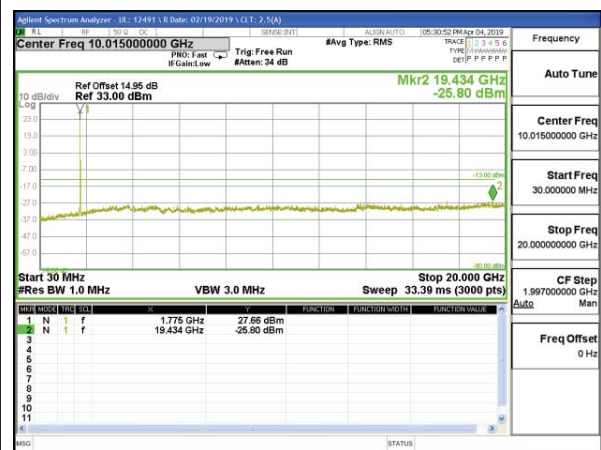
LTE B66 10MHz QPSK Middle Channel RB1-0



LTE B66 10MHz 16QAM Middle Channel RB1-0



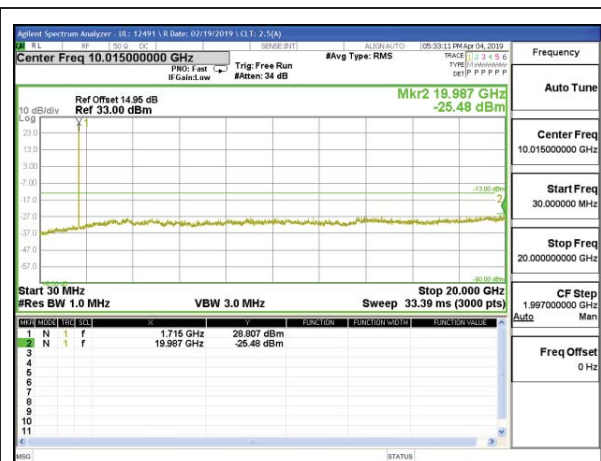
LTE B66 10MHz QPSK High Channel RB1-0



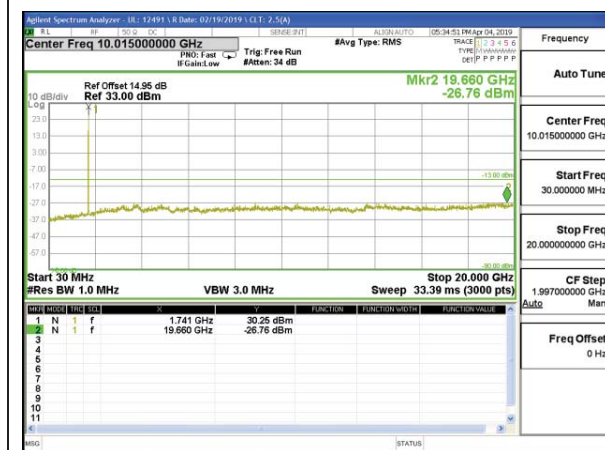
LTE B66 10MHz 16QAM High Channel RB1-0



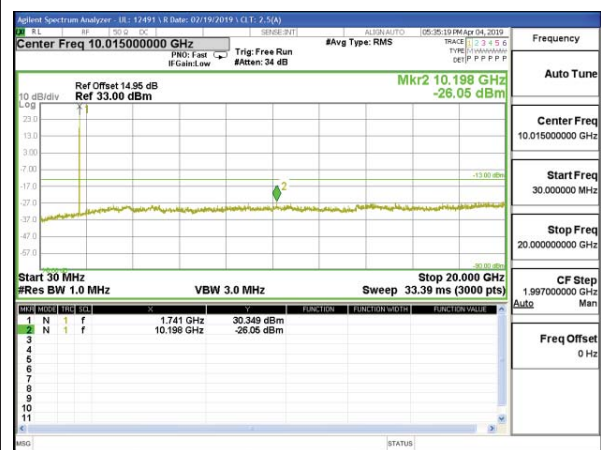
LTE B66 15MHz QPSK Low Channel RB1-0



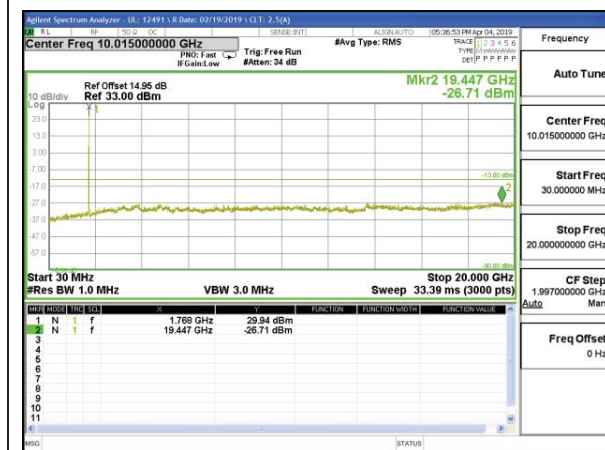
LTE B66 15MHz 16QAM Low Channel RB1-0



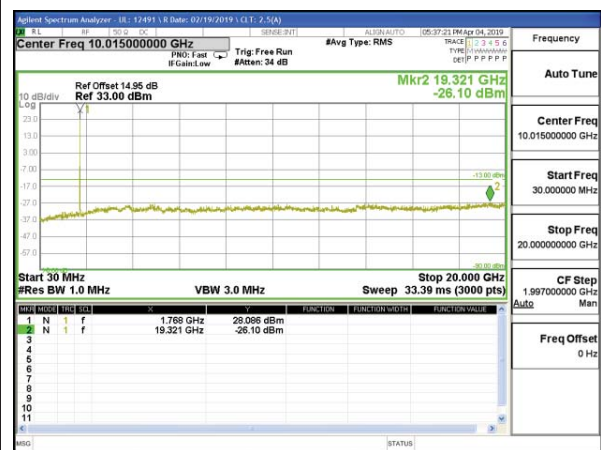
LTE B66 15MHz QPSK Middle Channel RB1-0



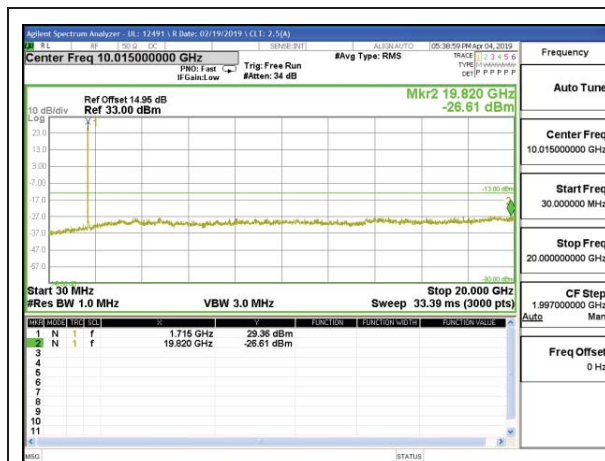
LTE B66 15MHz 16QAM Middle Channel RB1-0



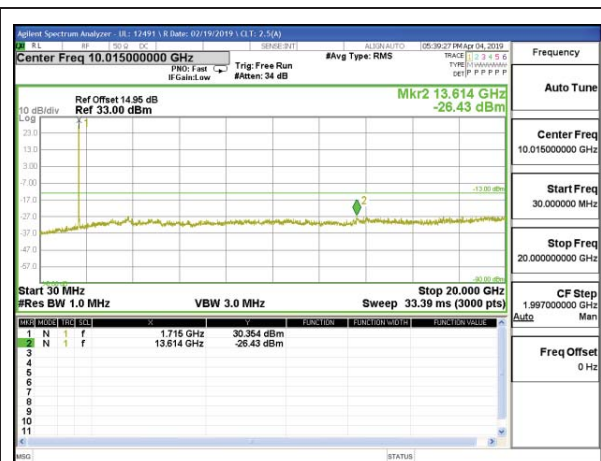
LTE B66 15MHz QPSK High Channel RB1-0



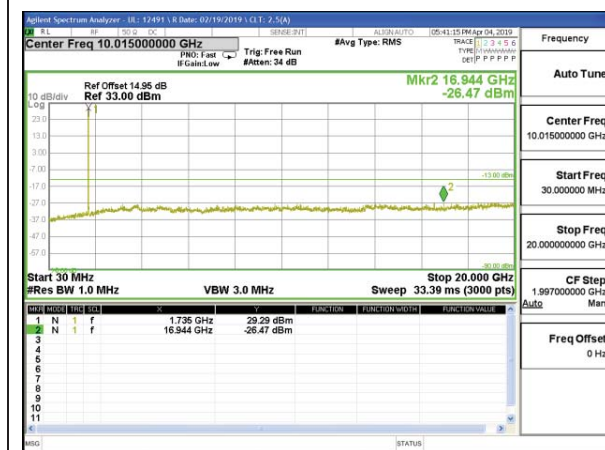
LTE B66 15MHz 16QAM High Channel RB1-0



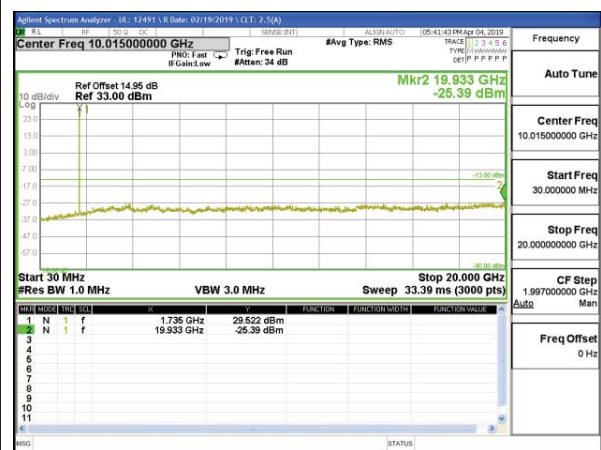
LTE B66 20MHz QPSK Low Channel RB1-0



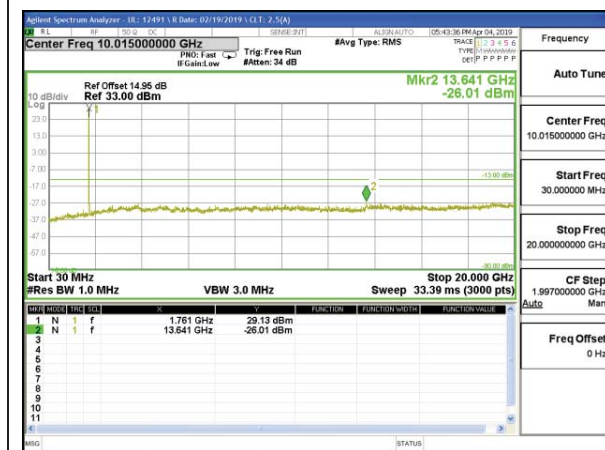
LTE B66 20MHz 16QAM Low Channel RB1-0



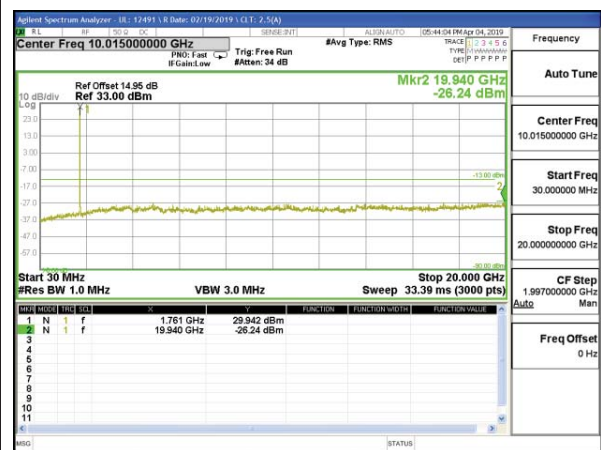
LTE B66 20MHz QPSK Middle Channel RB1-0



LTE B66 20MHz 16QAM Middle Channel RB1-0



LTE B66 20MHz QPSK High Channel RB1-0



LTE B66 20MHz 16QAM High Channel RB1-0

## 8.4. FREQUENCY STABILITY

### RULE PART(S)

FCC: §2.1055, §22.355, §24.235, §27.54, §90.213 and §90.539

### LIMITS

FCC: §22.355, §90.213

The carrier frequency shall not depart from the reference frequency in excess of  $\pm 2.5$  ppm for mobile stations.

FCC: §90.539

(e) The frequency stability of mobile, portable and control transmitters operating in the wideband segment must be 1.25 ppm or better when AFC is locked to a base station, and 5 ppm or better when AFC is not locked.

FCC: §24.235 & §27.54

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

### TEST PROCEDURE

Use CMW 500 with Frequency Error measurement capability.

- Temp. =  $-30^{\circ}\text{C}$  to  $+50^{\circ}\text{C}$
- Voltage = (85% - 115%)  
Low voltage, 3.23VDC, Normal, 3.8VDC and High voltage, 4.37VDC.  
End Voltage, 3.2VDC.

#### **Frequency Stability vs Temperature:**

The EUT is placed inside a temperature chamber. The temperature is set to  $20^{\circ}\text{C}$  and allowed to stabilize. After sufficient soak time, the transmitting frequency error is measured. The temperature is increased by 10 degrees, allowed to stabilize and soak, and then the measurement is repeated. This is repeated until  $+50^{\circ}\text{C}$  is reached.

#### **Frequency Stability vs Voltage:**

The peak frequency error is recorded (worst-case).

### MODES TESTED

- LTE Band 2
- LTE Band 5
- LTE Band 7
- LTE Band 12
- LTE Band 13
- LTE Band 17
- LTE Band 25
- LTE Band 26
- LTE Band 30
- LTE Band 41
- LTE Band 48
- LTE Band 66

### RESULTS

See the following pages.

### 8.4.1. LTE BAND 2

|            |       |              |         |
|------------|-------|--------------|---------|
| <b>ID:</b> | 38602 | <b>Date:</b> | 3/29/19 |
|------------|-------|--------------|---------|

#### QPSK, (20MHz BANDWIDTH)

| Limit          |           | 1850                       | 1910                        | Delta<br>(Hz) | Frequency<br>Stability<br>(ppm) |
|----------------|-----------|----------------------------|-----------------------------|---------------|---------------------------------|
| Condition      |           | F low @<br>-13dBm<br>(MHz) | F high @<br>-13dBm<br>(MHz) |               |                                 |
| Temperature    | Voltage   |                            |                             |               |                                 |
| Normal (20C)   | Normal    | 1851.0025                  | 1908.9916                   |               |                                 |
| Extreme (50C)  |           | 1851.0025                  | 1908.9916                   | 1.0           | 0.001                           |
| Extreme (40C)  |           | 1851.0025                  | 1908.9916                   | 1.1           | 0.001                           |
| Extreme (30C)  |           | 1851.0025                  | 1908.9916                   | 1.2           | 0.001                           |
| Extreme (10C)  |           | 1851.0025                  | 1908.9916                   | 1.1           | 0.001                           |
| Extreme (0C)   |           | 1851.0025                  | 1908.9916                   | 0.9           | 0.000                           |
| Extreme (-10C) |           | 1851.0025                  | 1908.9916                   | 0.9           | 0.000                           |
| Extreme (-20C) |           | 1851.0025                  | 1908.9916                   | -0.7          | 0.000                           |
| Extreme (-30C) |           | 1851.0025                  | 1908.9916                   | 0.8           | 0.000                           |
|                |           |                            |                             |               |                                 |
| 20C            | 15%       | 1851.0025                  | 1908.9916                   | 4.1           | 0.002                           |
|                | -15%      | 1851.0025                  | 1908.9916                   | 3.4           | 0.002                           |
|                | End Point | 1851.0025                  | 1908.9916                   | 4.6           | 0.002                           |

### 8.4.2. LTE BAND 5

|            |       |              |         |
|------------|-------|--------------|---------|
| <b>ID:</b> | 38806 | <b>Date:</b> | 3/29/19 |
|------------|-------|--------------|---------|

#### QPSK, (10MHz BANDWIDTH)

| Limit          |           | 824                        | 849                         | Delta<br>(Hz) | Frequency<br>Stability<br>(ppm) |
|----------------|-----------|----------------------------|-----------------------------|---------------|---------------------------------|
| Condition      |           | F low @<br>-13dBm<br>(MHz) | F high @<br>-13dBm<br>(MHz) |               |                                 |
| Temperature    | Voltage   |                            |                             |               |                                 |
| Normal (20C)   | Normal    | 824.4820                   | 848.5374                    |               |                                 |
| Extreme (50C)  |           | 824.4820                   | 848.5374                    | 1.1           | 0.001                           |
| Extreme (40C)  |           | 824.4820                   | 848.5374                    | 1.2           | 0.001                           |
| Extreme (30C)  |           | 824.4820                   | 848.5374                    | 1.3           | 0.002                           |
| Extreme (10C)  |           | 824.4820                   | 848.5374                    | 1.5           | 0.002                           |
| Extreme (0C)   |           | 824.4820                   | 848.5374                    | 1.7           | 0.002                           |
| Extreme (-10C) |           | 824.4820                   | 848.5374                    | 2.0           | 0.002                           |
| Extreme (-20C) |           | 824.4820                   | 848.5374                    | 1.9           | 0.002                           |
| Extreme (-30C) |           | 824.4820                   | 848.5374                    | 2.0           | 0.002                           |
|                |           |                            |                             |               |                                 |
| 20C            | 15%       | 824.4820                   | 848.5374                    | 4.8           | 0.006                           |
|                | -15%      | 824.4820                   | 848.5374                    | 4.6           | 0.006                           |
|                | End Point | 824.4820                   | 848.5374                    | 5.8           | 0.007                           |

### 8.4.3. LTE BAND 7

|            |       |              |        |
|------------|-------|--------------|--------|
| <b>ID:</b> | 38602 | <b>Date:</b> | 4/1/19 |
|------------|-------|--------------|--------|

#### QPSK, (20MHz BANDWIDTH)

| Limit          |           | 2500                       | 2570                        | Delta<br>(Hz) | Frequency<br>Stability<br>(ppm) |
|----------------|-----------|----------------------------|-----------------------------|---------------|---------------------------------|
| Condition      |           | F low @<br>-13dBm<br>(MHz) | F high @<br>-13dBm<br>(MHz) |               |                                 |
| Temperature    | Voltage   |                            |                             |               |                                 |
| Normal (20C)   | Normal    | 2501.0148                  | 2568.9915                   |               |                                 |
| Extreme (50C)  |           | 2501.0148                  | 2568.9915                   | 2.2           | 0.001                           |
| Extreme (40C)  |           | 2501.0148                  | 2568.9915                   | 3.4           | 0.001                           |
| Extreme (30C)  |           | 2501.0148                  | 2568.9915                   | 3.2           | 0.001                           |
| Extreme (10C)  |           | 2501.0148                  | 2568.9915                   | 2.6           | 0.001                           |
| Extreme (0C)   |           | 2501.0148                  | 2568.9915                   | 2.9           | 0.001                           |
| Extreme (-10C) |           | 2501.0148                  | 2568.9915                   | 3.0           | 0.001                           |
| Extreme (-20C) |           | 2501.0148                  | 2568.9915                   | 3.3           | 0.001                           |
| Extreme (-30C) |           | 2501.0148                  | 2568.9915                   | 3.1           | 0.001                           |
|                |           |                            |                             |               |                                 |
| 20C            | 15%       | 2501.0148                  | 2568.9915                   | 2.4           | 0.001                           |
|                | -15%      | 2501.0148                  | 2568.9915                   | 2.1           | 0.001                           |
|                | End Point | 2501.0148                  | 2568.9915                   | 1.9           | 0.001                           |

### 8.4.4. LTE BAND 12

|            |       |              |        |
|------------|-------|--------------|--------|
| <b>ID:</b> | 38602 | <b>Date:</b> | 4/1/19 |
|------------|-------|--------------|--------|

#### QPSK, (10MHz BANDWIDTH)

| Limit          |           | 699                        | 716                         | Delta<br>(Hz) | Frequency<br>Stability<br>(ppm) |
|----------------|-----------|----------------------------|-----------------------------|---------------|---------------------------------|
| Condition      |           | F low @<br>-13dBm<br>(MHz) | F high @<br>-13dBm<br>(MHz) |               |                                 |
| Temperature    | Voltage   |                            |                             |               |                                 |
| Normal (20C)   | Normal    | 699.4173                   | 715.5166                    |               |                                 |
| Extreme (50C)  |           | 699.4173                   | 715.5166                    | 1.2           | 0.002                           |
| Extreme (40C)  |           | 699.4173                   | 715.5166                    | 1.3           | 0.002                           |
| Extreme (30C)  |           | 699.4173                   | 715.5166                    | 1.3           | 0.002                           |
| Extreme (10C)  |           | 699.4173                   | 715.5166                    | 1.5           | 0.002                           |
| Extreme (0C)   |           | 699.4173                   | 715.5166                    | 1.2           | 0.002                           |
| Extreme (-10C) |           | 699.4173                   | 715.5166                    | 1.4           | 0.002                           |
| Extreme (-20C) |           | 699.4173                   | 715.5166                    | 1.3           | 0.002                           |
| Extreme (-30C) |           | 699.4173                   | 715.5166                    | 1.7           | 0.002                           |
|                |           |                            |                             |               |                                 |
| 20C            | 15%       | 699.4173                   | 715.5166                    | 4.6           | 0.006                           |
|                | -15%      | 699.4173                   | 715.5166                    | 3.9           | 0.005                           |
|                | End Point | 699.4173                   | 715.5166                    | 4.5           | 0.006                           |

### 8.4.5. LTE BAND 13

|            |       |              |        |
|------------|-------|--------------|--------|
| <b>ID:</b> | 38602 | <b>Date:</b> | 4/1/19 |
|------------|-------|--------------|--------|

#### QPSK, (10MHz BANDWIDTH)

| Limit          |           | 777                        | 787                         | Delta<br>(Hz) | Frequency<br>Stability<br>(ppm) |
|----------------|-----------|----------------------------|-----------------------------|---------------|---------------------------------|
| Condition      |           | F low @<br>-13dBm<br>(MHz) | F high @<br>-13dBm<br>(MHz) |               |                                 |
| Temperature    | Voltage   |                            |                             |               |                                 |
| Normal (20C)   | Normal    | 777.2063                   | 786.8172                    |               |                                 |
| Extreme (50C)  |           | 777.2063                   | 786.8172                    | 1.2           | 0.002                           |
| Extreme (40C)  |           | 777.2063                   | 786.8172                    | 1.1           | 0.001                           |
| Extreme (30C)  |           | 777.2063                   | 786.8172                    | 0.9           | 0.001                           |
| Extreme (10C)  |           | 777.2063                   | 786.8172                    | 1.1           | 0.001                           |
| Extreme (0C)   |           | 777.2063                   | 786.8172                    | 1.0           | 0.001                           |
| Extreme (-10C) |           | 777.2063                   | 786.8172                    | 0.8           | 0.001                           |
| Extreme (-20C) |           | 777.2063                   | 786.8172                    | 1.1           | 0.001                           |
| Extreme (-30C) |           | 777.2063                   | 786.8172                    | 1.3           | 0.002                           |
|                |           |                            |                             |               |                                 |
| 20C            | 15%       | 777.2063                   | 786.8172                    | 4.4           | 0.006                           |
|                | -15%      | 777.2063                   | 786.8172                    | 4.1           | 0.005                           |
|                | End Point | 777.2063                   | 786.8172                    | 4.9           | 0.006                           |

### 8.4.6. LTE BAND 17

|            |       |              |        |
|------------|-------|--------------|--------|
| <b>ID:</b> | 30606 | <b>Date:</b> | 4/1/19 |
|------------|-------|--------------|--------|

#### QPSK, (10MHz BANDWIDTH)

| Limit          |           | 704                        | 716                         | Delta<br>(Hz) | Frequency<br>Stability<br>(ppm) |
|----------------|-----------|----------------------------|-----------------------------|---------------|---------------------------------|
| Condition      |           | F low @<br>-13dBm<br>(MHz) | F high @<br>-13dBm<br>(MHz) |               |                                 |
| Temperature    | Voltage   |                            |                             |               |                                 |
| Normal (20C)   | Normal    | 704.4119                   | 715.5903                    |               |                                 |
| Extreme (50C)  |           | 704.4119                   | 715.5903                    | 1.4           | 0.002                           |
| Extreme (40C)  |           | 704.4119                   | 715.5903                    | 1.5           | 0.002                           |
| Extreme (30C)  |           | 704.4119                   | 715.5903                    | 1.2           | 0.002                           |
| Extreme (10C)  |           | 704.4119                   | 715.5903                    | 1.5           | 0.002                           |
| Extreme (0C)   |           | 704.4119                   | 715.5903                    | 1.3           | 0.002                           |
| Extreme (-10C) |           | 704.4119                   | 715.5903                    | 1.4           | 0.002                           |
| Extreme (-20C) |           | 704.4119                   | 715.5903                    | 1.6           | 0.002                           |
| Extreme (-30C) |           | 704.4119                   | 715.5903                    | 1.5           | 0.002                           |
|                |           |                            |                             |               |                                 |
| 20C            | 15%       | 704.4119                   | 715.5903                    | 4.7           | 0.007                           |
|                | -15%      | 704.4119                   | 715.5903                    | 4.3           | 0.006                           |
|                | End Point | 704.4119                   | 715.5903                    | 4.9           | 0.007                           |

### 8.4.7. LTE BAND 25

|            |       |              |        |
|------------|-------|--------------|--------|
| <b>ID:</b> | 30606 | <b>Date:</b> | 4/1/19 |
|------------|-------|--------------|--------|

#### QPSK, (20MHz BANDWIDTH)

| Limit          |           | 1850              | 1915               | Delta<br>(Hz) | Frequency<br>Stability<br>(ppm) |
|----------------|-----------|-------------------|--------------------|---------------|---------------------------------|
| Condition      |           | F low @<br>-13dBm | F high @<br>-13dBm |               |                                 |
| Temperature    | Voltage   | (MHz)             | (MHz)              |               |                                 |
| Normal (20C)   | Normal    | 1851.0109         | 1913.9872          |               |                                 |
| Extreme (50C)  |           | 1851.0109         | 1913.9872          | 1.2           | 0.001                           |
| Extreme (40C)  |           | 1851.0109         | 1913.9872          | 1.0           | 0.001                           |
| Extreme (30C)  |           | 1851.0109         | 1913.9872          | -1.2          | -0.001                          |
| Extreme (10C)  |           | 1851.0109         | 1913.9872          | -0.7          | 0.000                           |
| Extreme (0C)   |           | 1851.0109         | 1913.9872          | -1.3          | -0.001                          |
| Extreme (-10C) |           | 1851.0109         | 1913.9872          | -0.7          | 0.000                           |
| Extreme (-20C) |           | 1851.0109         | 1913.9872          | -1.0          | -0.001                          |
| Extreme (-30C) |           | 1851.0109         | 1913.9872          | -0.6          | 0.000                           |
|                |           |                   |                    |               |                                 |
| 20C            | 15%       | 1851.0109         | 1913.9872          | 3.9           | 0.002                           |
|                | -15%      | 1851.0109         | 1913.9872          | 3.9           | 0.002                           |
|                | End Point | 1851.0109         | 1913.9872          | 4.5           | 0.002                           |

### 8.4.8. LTE BAND 26 (PART 90S)

|            |       |              |        |
|------------|-------|--------------|--------|
| <b>ID:</b> | 30606 | <b>Date:</b> | 4/1/19 |
|------------|-------|--------------|--------|

#### QPSK, (10MHz BANDWIDTH)

| Limit          |           | 814               | 824                | Delta<br>(Hz) | Frequency<br>Stability<br>(ppm) |
|----------------|-----------|-------------------|--------------------|---------------|---------------------------------|
| Condition      |           | F low @<br>-13dBm | F high @<br>-13dBm |               |                                 |
| Temperature    | Voltage   | (MHz)             | (MHz)              |               |                                 |
| Normal (20C)   | Normal    | 814.2039          | 823.8218           |               |                                 |
| Extreme (50C)  |           | 814.2039          | 823.8218           | 1.2           | 0.001                           |
| Extreme (40C)  |           | 814.2039          | 823.8218           | 1.0           | 0.001                           |
| Extreme (30C)  |           | 814.2039          | 823.8218           | 1.1           | 0.001                           |
| Extreme (10C)  |           | 814.2039          | 823.8218           | 1.2           | 0.001                           |
| Extreme (0C)   |           | 814.2039          | 823.8218           | 1.0           | 0.001                           |
| Extreme (-10C) |           | 814.2039          | 823.8218           | 1.1           | 0.001                           |
| Extreme (-20C) |           | 814.2039          | 823.8218           | 0.9           | 0.001                           |
| Extreme (-30C) |           | 814.2039          | 823.8218           | 1.4           | 0.002                           |
|                |           |                   |                    |               |                                 |
| 20C            | 15%       | 814.2039          | 823.8218           | 4.6           | 0.006                           |
|                | -15%      | 814.2039          | 823.8218           | 4.3           | 0.005                           |
|                | End Point | 814.2039          | 823.8218           | 4.6           | 0.006                           |

### 8.4.9. LTE BAND 30

|     |       |       |        |
|-----|-------|-------|--------|
| ID: | 38602 | Date: | 4/2/19 |
|-----|-------|-------|--------|

#### QPSK, (10MHz BANDWIDTH)

| Limit          |           | 2305                       | 2315                        | Delta<br>(Hz) | Frequency<br>Stability<br>(ppm) |
|----------------|-----------|----------------------------|-----------------------------|---------------|---------------------------------|
| Condition      |           | F low @<br>-13dBm<br>(MHz) | F high @<br>-13dBm<br>(MHz) |               |                                 |
| Temperature    | Voltage   |                            |                             |               |                                 |
| Normal (20C)   | Normal    | 2305.4850                  | 2314.4973                   |               |                                 |
| Extreme (50C)  |           | 2305.4850                  | 2314.4973                   | 1.9           | 0.001                           |
| Extreme (40C)  |           | 2305.4850                  | 2314.4973                   | 2.1           | 0.001                           |
| Extreme (30C)  |           | 2305.4850                  | 2314.4973                   | 1.5           | 0.001                           |
| Extreme (10C)  |           | 2305.4850                  | 2314.4973                   | 1.6           | 0.001                           |
| Extreme (0C)   |           | 2305.4850                  | 2314.4973                   | 1.7           | 0.001                           |
| Extreme (-10C) |           | 2305.4850                  | 2314.4973                   | 2.1           | 0.001                           |
| Extreme (-20C) |           | 2305.4850                  | 2314.4973                   | 2.2           | 0.001                           |
| Extreme (-30C) |           | 2305.4850                  | 2314.4973                   | 1.8           | 0.001                           |
|                |           |                            |                             |               |                                 |
| 20C            | 15%       | 2305.4850                  | 2314.4973                   | 4.2           | 0.002                           |
|                | -15%      | 2305.4850                  | 2314.4973                   | 4.3           | 0.002                           |
|                | End Point | 2305.4850                  | 2314.4973                   | 4.4           | 0.002                           |

### 8.4.10. LTE BAND 41

|     |       |       |        |
|-----|-------|-------|--------|
| ID: | 38602 | Date: | 4/2/19 |
|-----|-------|-------|--------|

#### QPSK, (20MHz BANDWIDTH)

| Limit          |           | 2496                       | 2690                        | Delta<br>(Hz) | Frequency<br>Stability<br>(ppm) |
|----------------|-----------|----------------------------|-----------------------------|---------------|---------------------------------|
| Condition      |           | F low @<br>-13dBm<br>(MHz) | F high @<br>-13dBm<br>(MHz) |               |                                 |
| Temperature    | Voltage   |                            |                             |               |                                 |
| Normal (20C)   | Normal    | 2496.9323                  | 2689.1225                   |               |                                 |
| Extreme (50C)  |           | 2496.9323                  | 2689.1225                   | 2.2           | 0.001                           |
| Extreme (40C)  |           | 2496.9323                  | 2689.1225                   | 2.4           | 0.001                           |
| Extreme (30C)  |           | 2496.9323                  | 2689.1225                   | 2.9           | 0.001                           |
| Extreme (10C)  |           | 2496.9323                  | 2689.1225                   | 3.3           | 0.001                           |
| Extreme (0C)   |           | 2496.9323                  | 2689.1225                   | 2.9           | 0.001                           |
| Extreme (-10C) |           | 2496.9323                  | 2689.1225                   | 3.4           | 0.001                           |
| Extreme (-20C) |           | 2496.9323                  | 2689.1225                   | 3.7           | 0.001                           |
| Extreme (-30C) |           | 2496.9323                  | 2689.1225                   | 3.4           | 0.001                           |
|                |           |                            |                             |               |                                 |
| 20C            | 15%       | 2496.9323                  | 2689.1225                   | 6.0           | 0.002                           |
|                | -15%      | 2496.9323                  | 2689.1225                   | 5.0           | 0.002                           |
|                | End Point | 2496.9323                  | 2689.1225                   | 4.7           | 0.002                           |

### 8.4.11. LTE BAND 48

|            |       |              |         |
|------------|-------|--------------|---------|
| <b>ID:</b> | 30606 | <b>Date:</b> | 5/24/19 |
|------------|-------|--------------|---------|

#### QPSK, (20MHz BANDWIDTH)

| Limit          |           | 3550                       | 3700                        | Delta<br>(Hz) | Frequency<br>Stability<br>(ppm) |
|----------------|-----------|----------------------------|-----------------------------|---------------|---------------------------------|
| Condition      |           | F low @<br>-13dBm<br>(MHz) | F high @<br>-13dBm<br>(MHz) |               |                                 |
| Temperature    | Voltage   |                            |                             |               |                                 |
| Normal (20C)   | Normal    | 3550.6883                  | 3699.2207                   |               |                                 |
| Extreme (50C)  |           | 3550.6883                  | 3699.2207                   | 6.3           | 0.002                           |
| Extreme (40C)  |           | 3550.6883                  | 3699.2207                   | 11.8          | 0.003                           |
| Extreme (30C)  |           | 3550.6883                  | 3699.2207                   | -7.3          | -0.002                          |
| Extreme (10C)  |           | 3550.6883                  | 3699.2207                   | 8.7           | 0.002                           |
| Extreme (0C)   |           | 3550.6883                  | 3699.2207                   | 8.3           | 0.002                           |
| Extreme (-10C) |           | 3550.6883                  | 3699.2207                   | -13.6         | -0.004                          |
| Extreme (-20C) |           | 3550.6883                  | 3699.2207                   | -16.4         | -0.005                          |
| Extreme (-30C) |           | 3550.6883                  | 3699.2207                   | -6.6          | -0.002                          |
|                |           |                            |                             |               |                                 |
| 20C            | 15%       | 3550.6883                  | 3699.2207                   | -11.2         | -0.003                          |
|                | -15%      | 3550.6883                  | 3699.2207                   | 10.2          | 0.003                           |
|                | End Point | 3550.6883                  | 3699.2207                   | -13.2         | -0.004                          |

### 8.4.12. LTE BAND 66

|            |       |              |        |
|------------|-------|--------------|--------|
| <b>ID:</b> | 38602 | <b>Date:</b> | 4/2/19 |
|------------|-------|--------------|--------|

#### QPSK, (20MHz BANDWIDTH)

| Limit          |           | 1710                       | 1780                        | Delta<br>(Hz) | Frequency<br>Stability<br>(ppm) |
|----------------|-----------|----------------------------|-----------------------------|---------------|---------------------------------|
| Condition      |           | F low @<br>-13dBm<br>(MHz) | F high @<br>-13dBm<br>(MHz) |               |                                 |
| Temperature    | Voltage   |                            |                             |               |                                 |
| Normal (20C)   | Normal    | 1711.0019                  | 1779.0219                   |               |                                 |
| Extreme (50C)  |           | 1711.0019                  | 1779.0219                   | 1.5           | 0.001                           |
| Extreme (40C)  |           | 1711.0019                  | 1779.0219                   | 1.7           | 0.001                           |
| Extreme (30C)  |           | 1711.0019                  | 1779.0219                   | 1.5           | 0.001                           |
| Extreme (10C)  |           | 1711.0019                  | 1779.0219                   | 1.1           | 0.001                           |
| Extreme (0C)   |           | 1711.0019                  | 1779.0219                   | 1.3           | 0.001                           |
| Extreme (-10C) |           | 1711.0019                  | 1779.0219                   | 1.5           | 0.001                           |
| Extreme (-20C) |           | 1711.0019                  | 1779.0219                   | 1.5           | 0.001                           |
| Extreme (-30C) |           | 1711.0019                  | 1779.0219                   | 1.1           | 0.001                           |
|                |           |                            |                             |               |                                 |
| 20C            | 15%       | 1711.0019                  | 1779.0219                   | 3.2           | 0.002                           |
|                | -15%      | 1711.0019                  | 1779.0219                   | 4.2           | 0.002                           |
|                | End Point | 1711.0019                  | 1779.0219                   | 4.4           | 0.003                           |

## 8.5. PEAK-TO-AVERAGE POWER RATIO

### LIMIT

In addition, the peak-to-average power ratio (PAPR) of the transmitter shall not exceed 13 dB for more than 0.1% of the time and shall use a signal corresponding to the highest PAPR during periods of continuous transmission.

### MODES TESTED

- LTE Band 2
- LTE Band 5
- LTE Band 7
- LTE Band 12
- LTE Band 13
- LTE Band 17
- LTE Band 25
- LTE Band 26
- LTE Band 30
- LTE Band 41
- LTE Band 48
- LTE Band 66

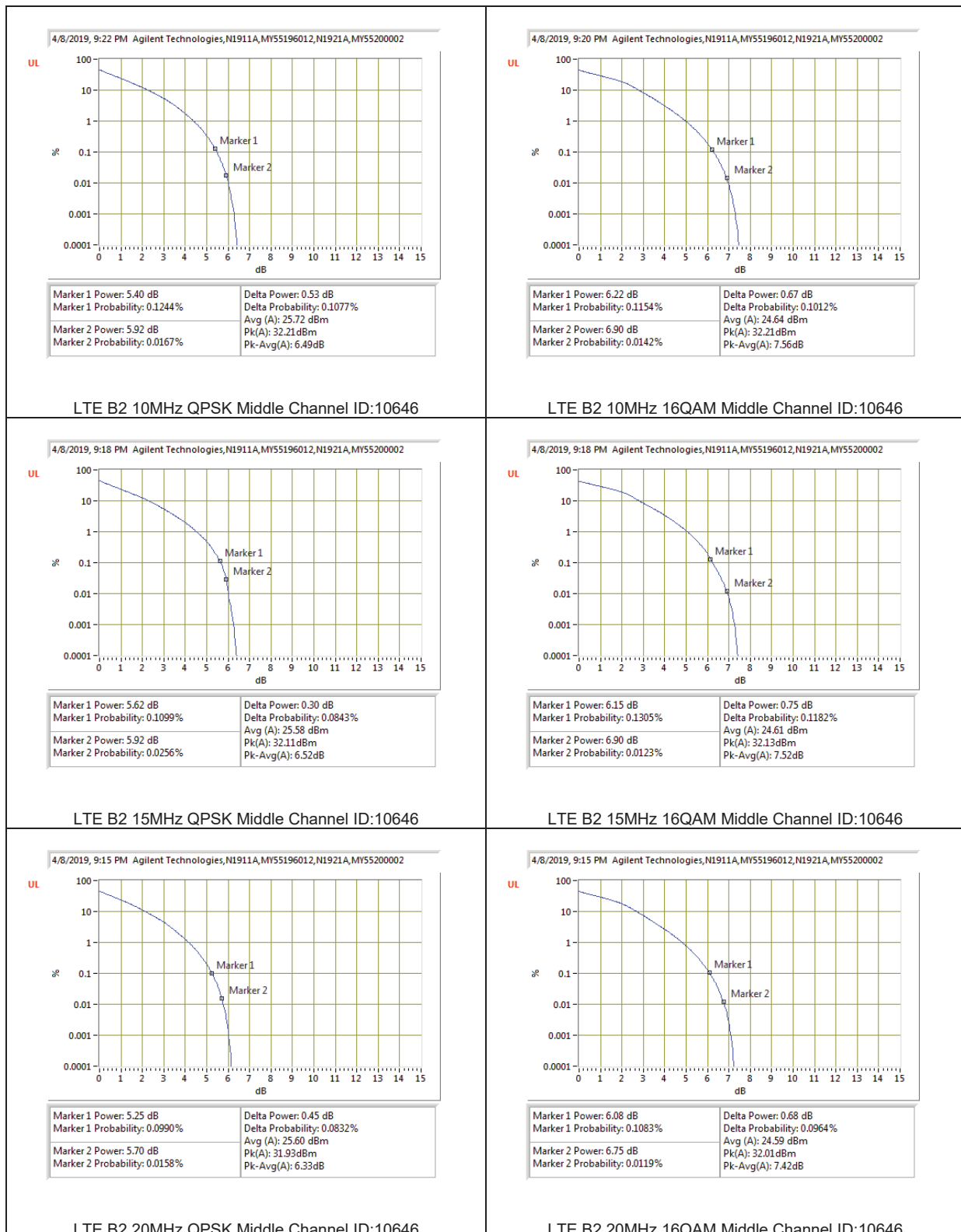
### RESULT

Antenna 1 was used to measure as the worst case; full resource block (FRB) for each bandwidth was used to measure as the worst case. The results from all CCDF measurements are passed with 13dB peak-to-average power ratio criteria.

|            |       |              |        |
|------------|-------|--------------|--------|
| <b>ID:</b> | 10646 | <b>Date:</b> | 4/8/19 |
|------------|-------|--------------|--------|

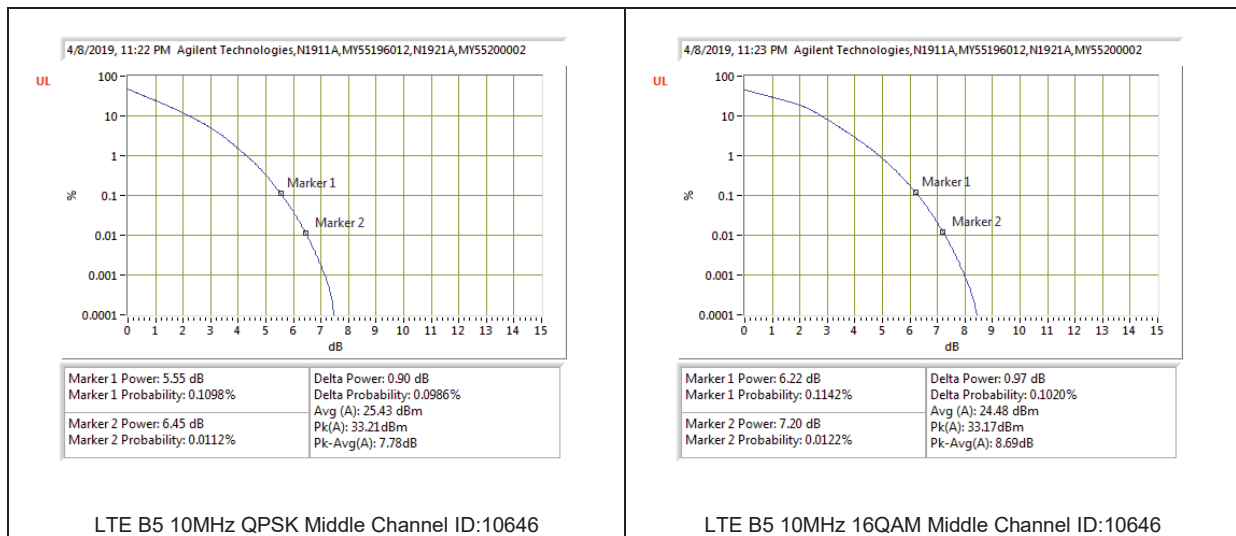
### 8.5.1. LTE BAND 2





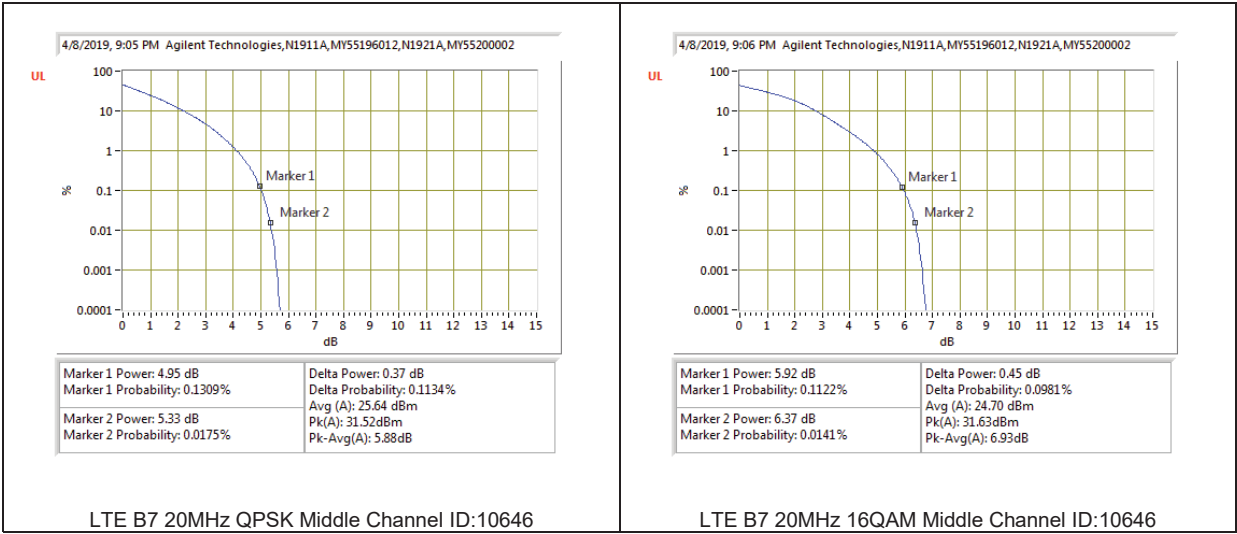
## 8.5.2. LTE BAND 5



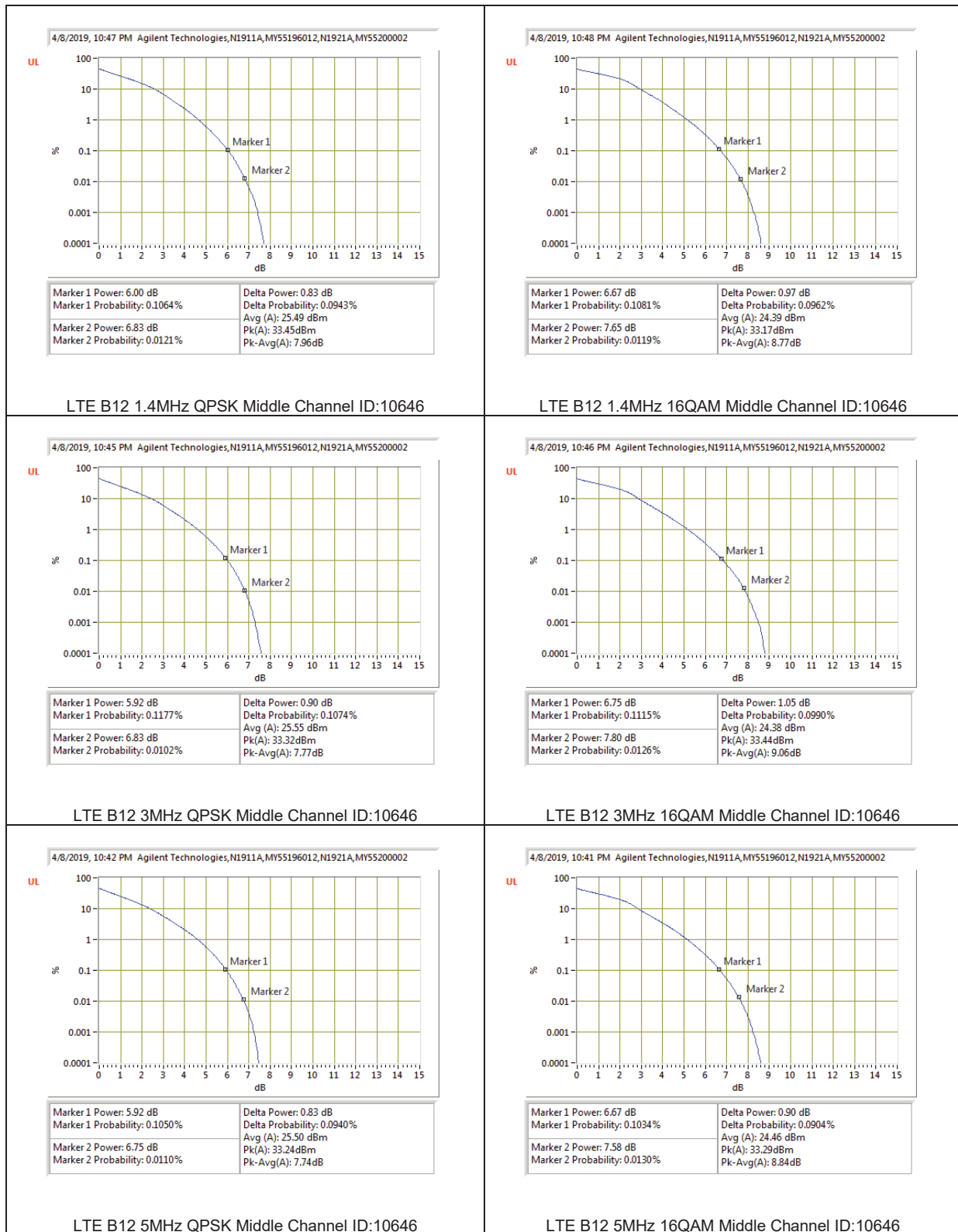


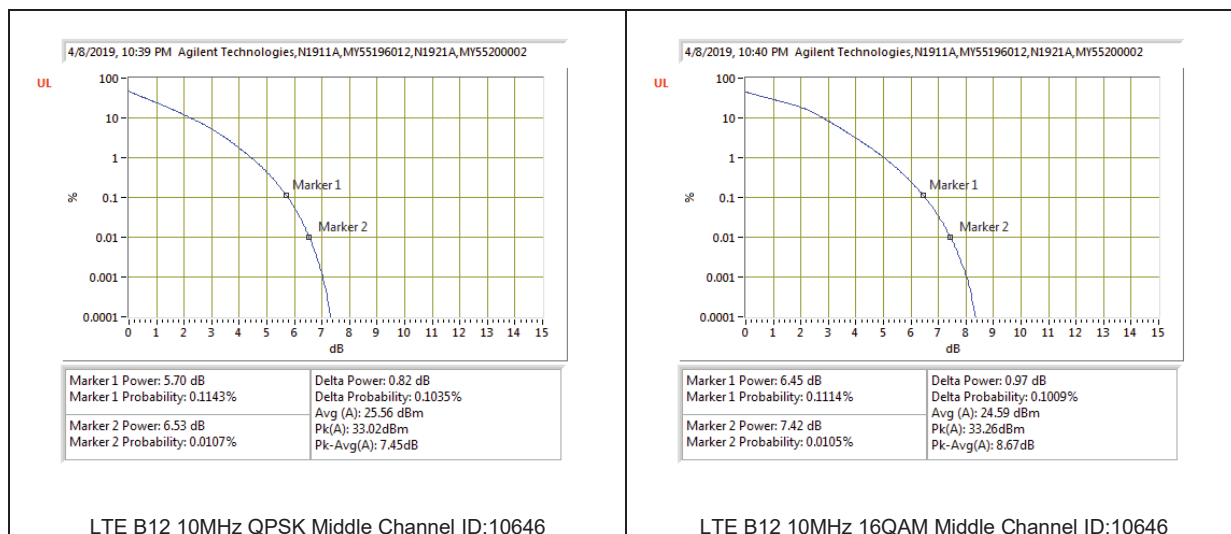
### 8.5.3. LTE BAND 7



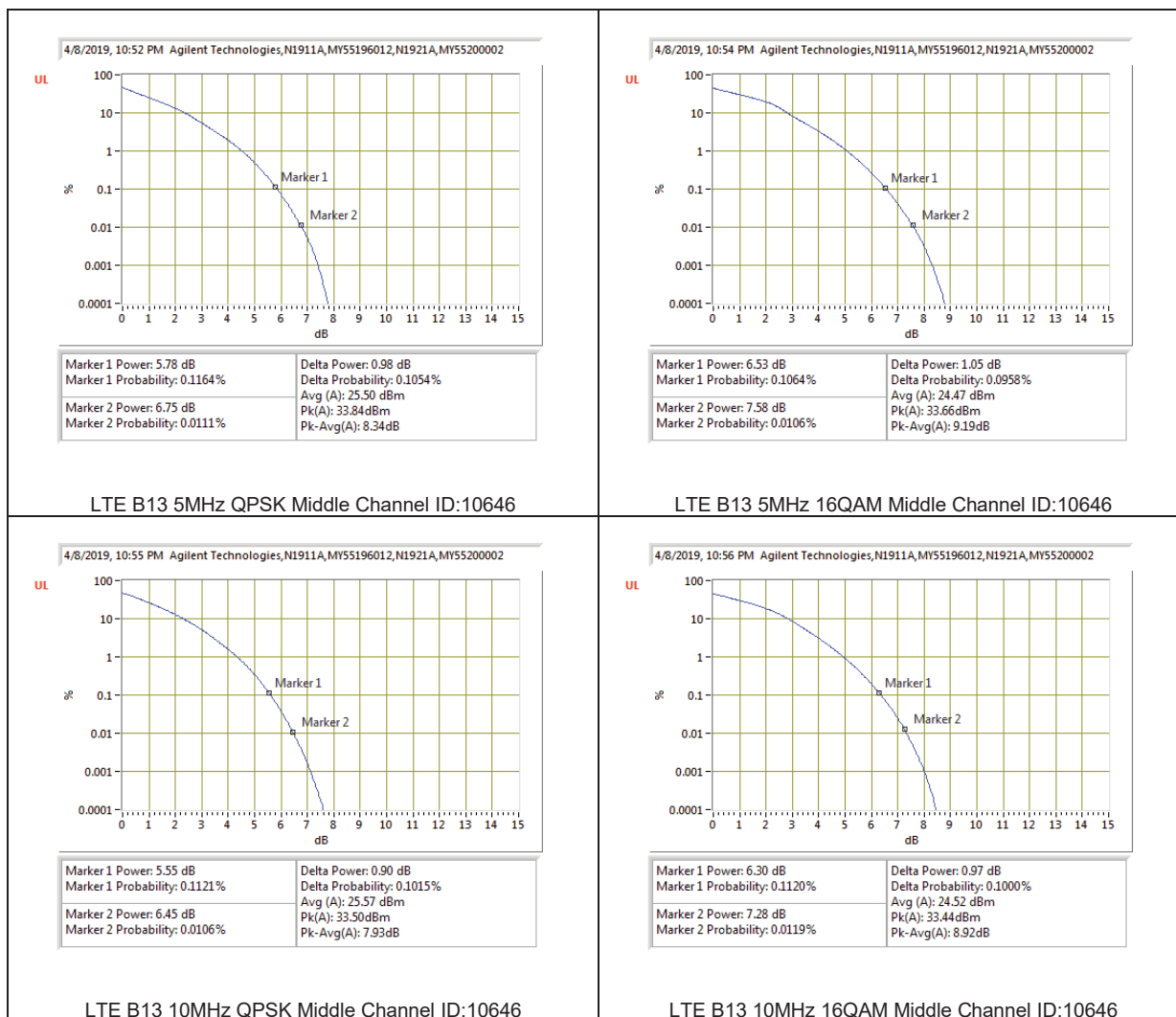


## 8.5.4. LTE BAND 12

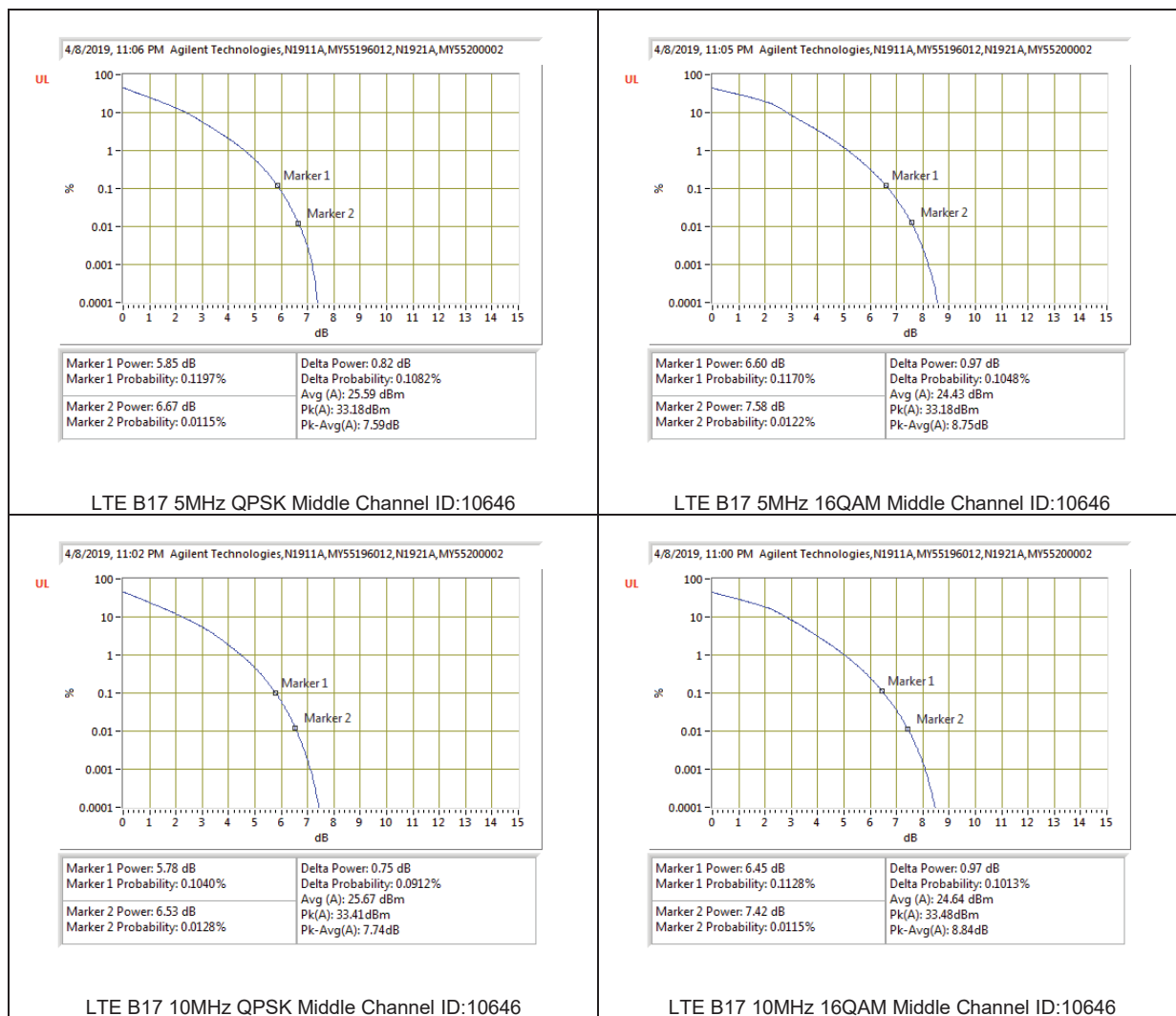




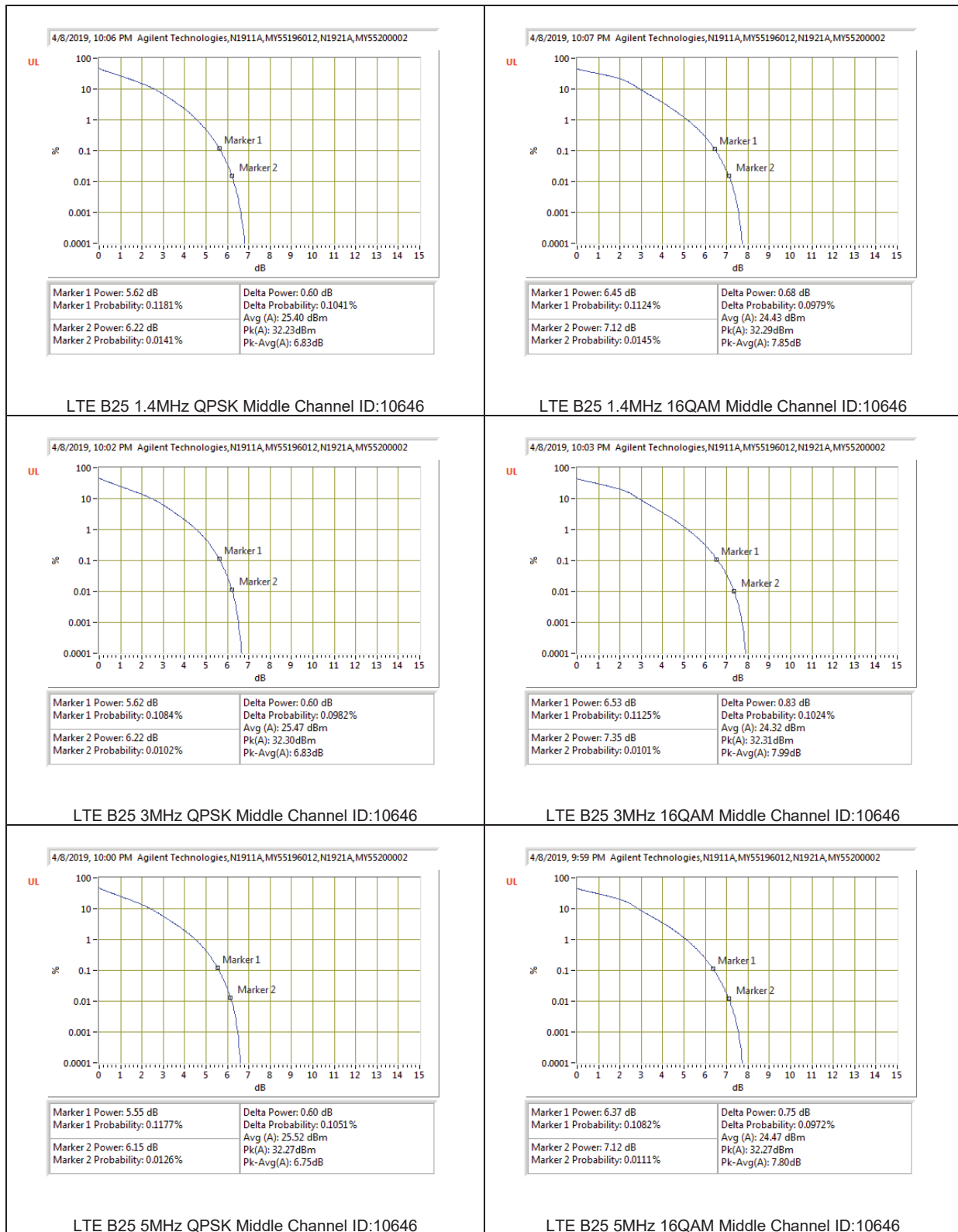
### 8.5.5. LTE BAND 13

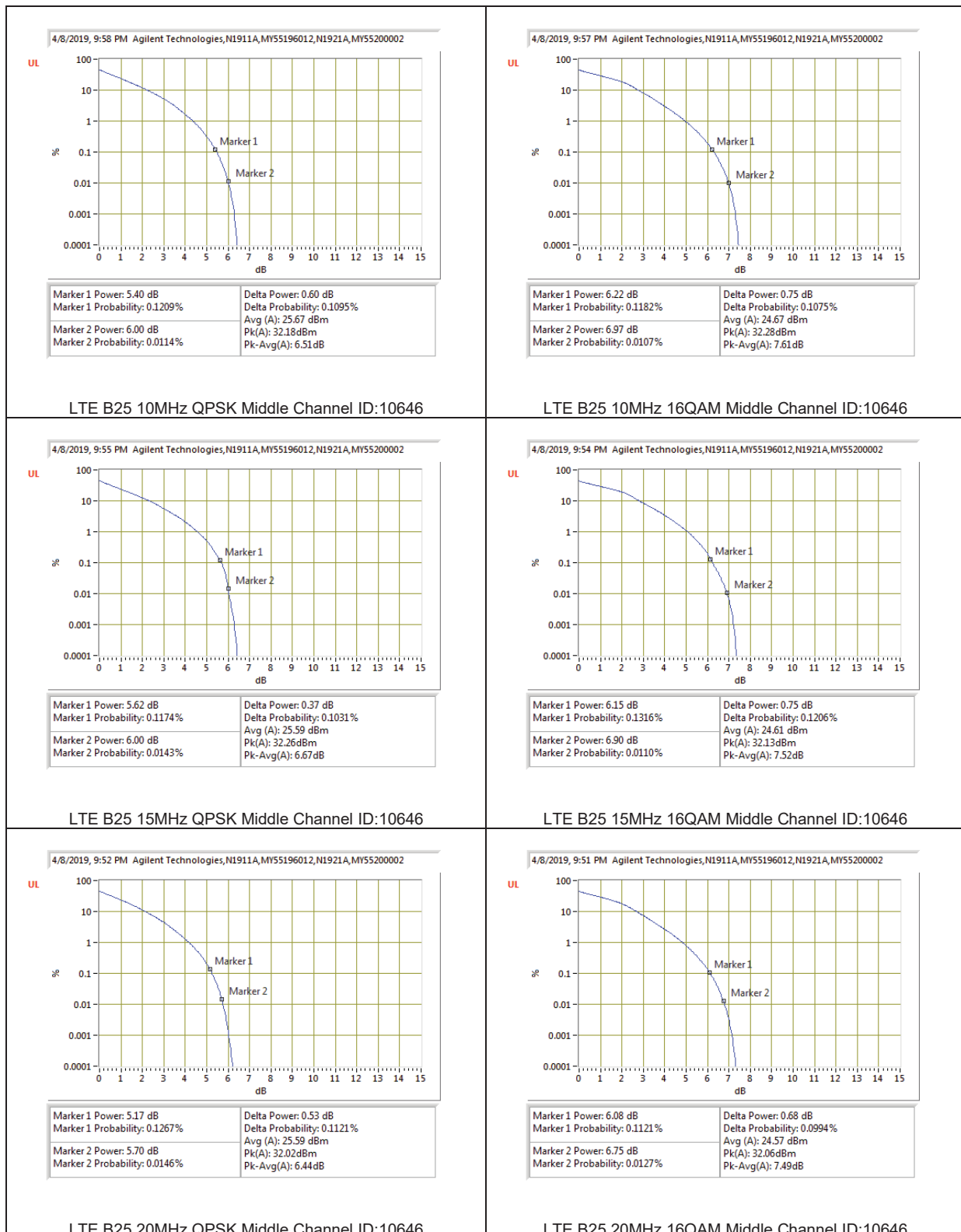


### 8.5.6. LTE BAND 17



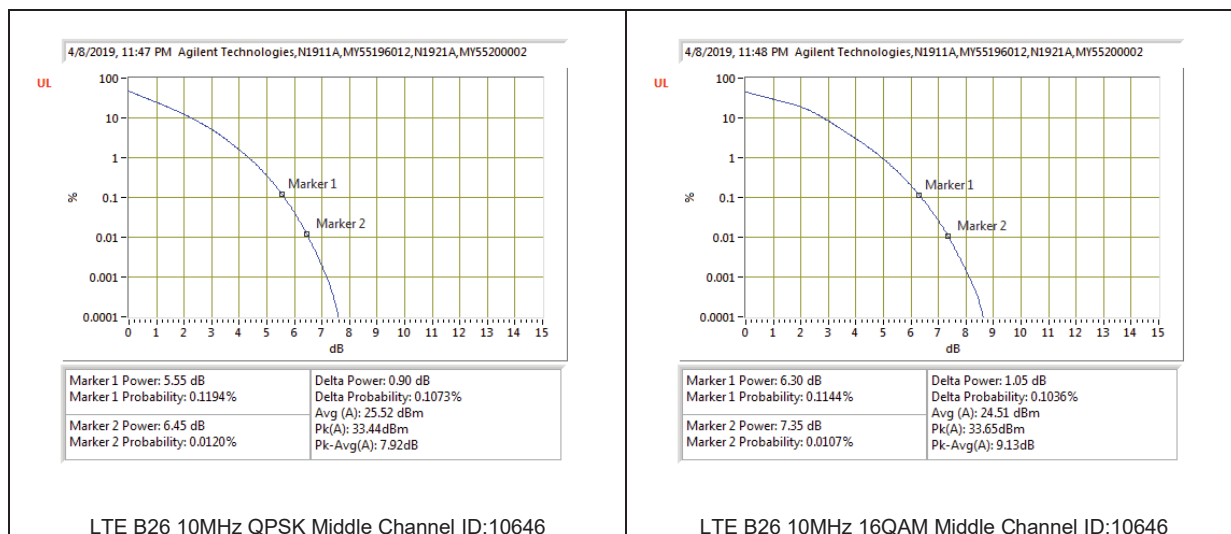
### 8.5.7. LTE BAND 25



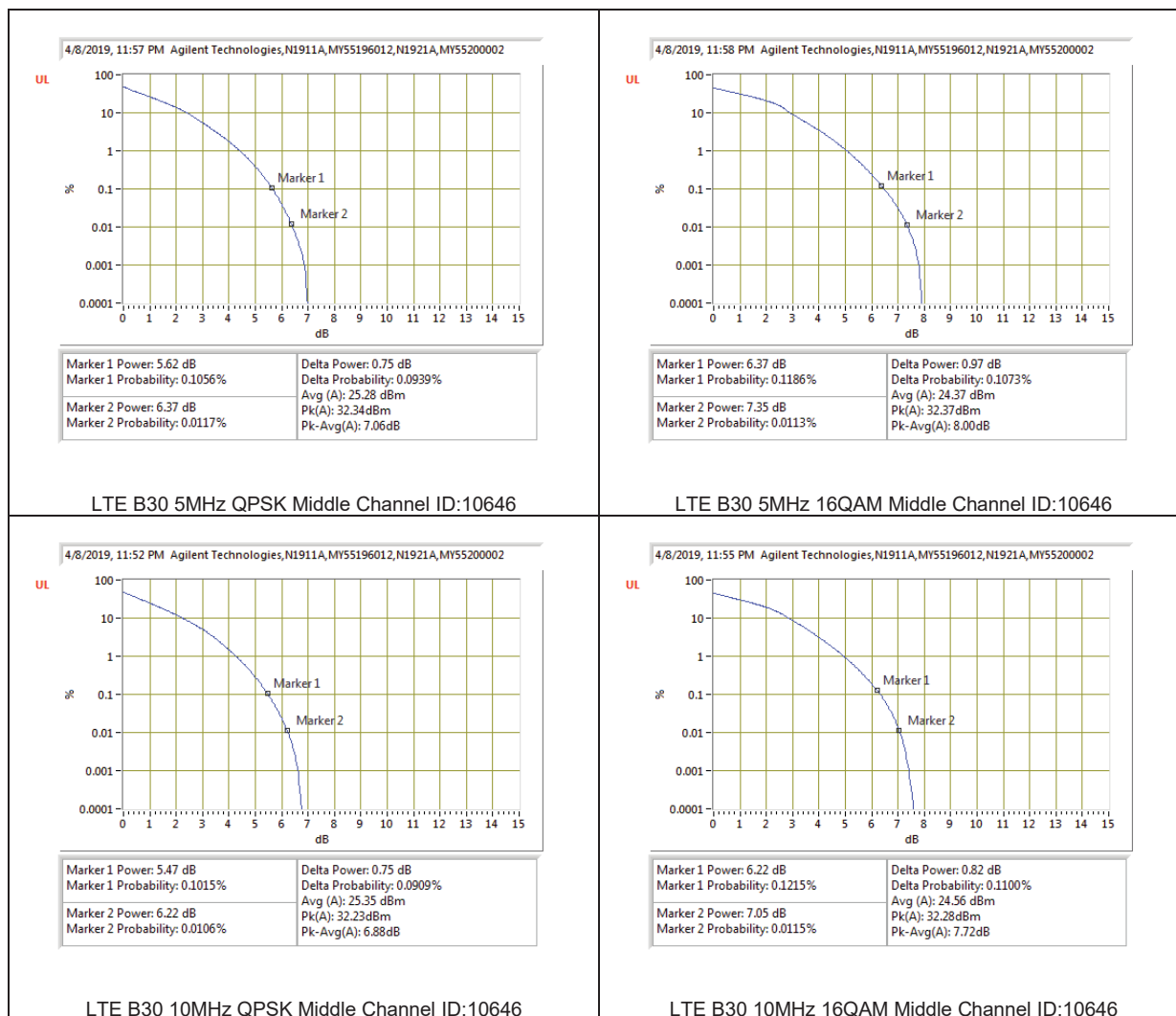


### 8.5.8. LTE BAND 26 (PART 90S)





### 8.5.9. LTE BAND 30



### 8.5.10. LTE BAND 41

|            |       |              |        |
|------------|-------|--------------|--------|
| <b>ID:</b> | 10646 | <b>Date:</b> | 4/8/19 |
|------------|-------|--------------|--------|

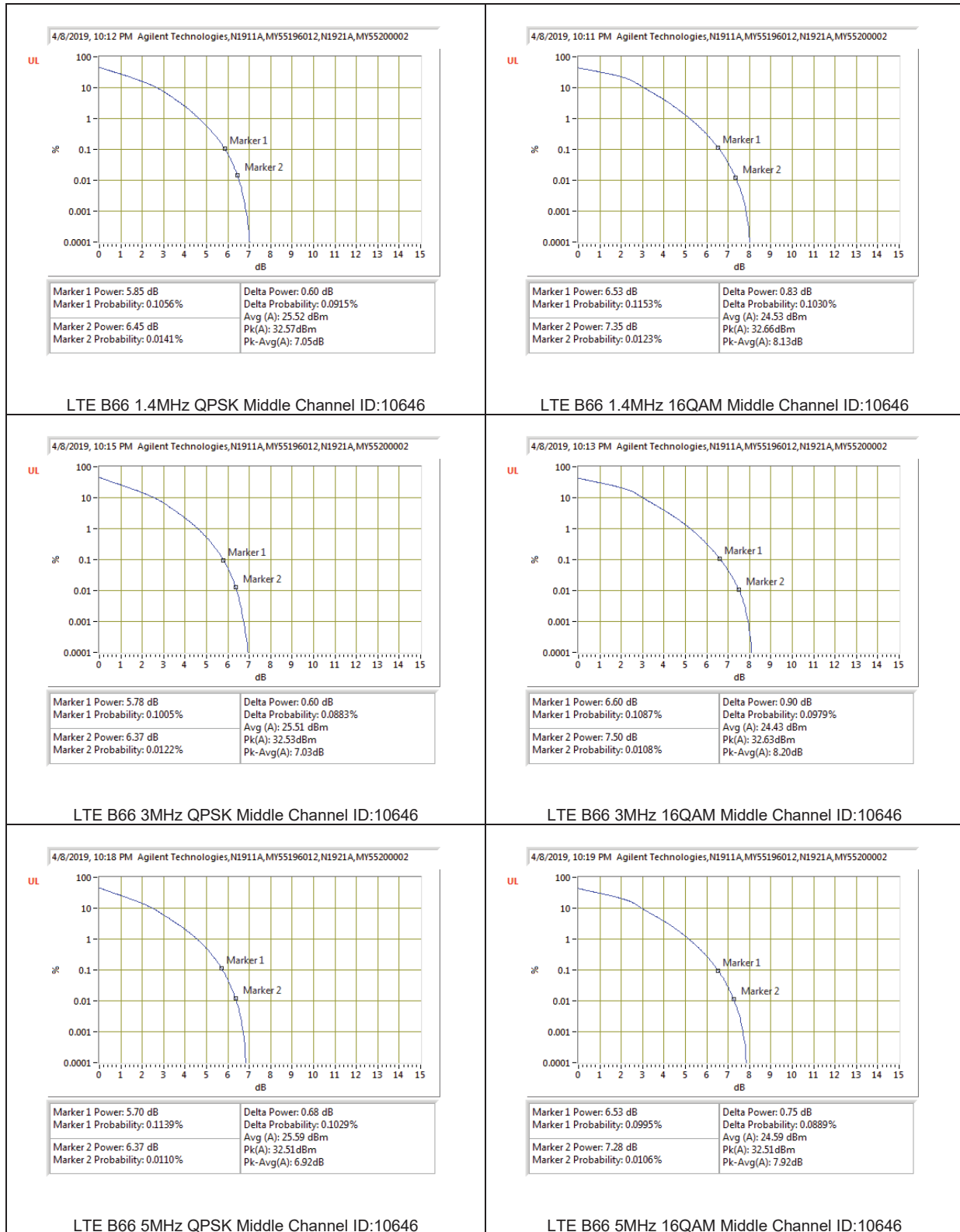
| Band                                                                                       | Bandwidth (MHz) | Frequency (MHz) | RB Allocation | RB OffSet | Modulation | Conducted Power (dBm) |         | Peak-to-Average Power Ratio (dB) |
|--------------------------------------------------------------------------------------------|-----------------|-----------------|---------------|-----------|------------|-----------------------|---------|----------------------------------|
|                                                                                            |                 |                 |               |           |            | Peak                  | Average |                                  |
| Band 41                                                                                    | 5MHz            | 2593.0          | 25            | 0         | QPSK       | 35.55                 | 21.45   | 7.11                             |
|                                                                                            |                 |                 |               |           | 16QAM      | 35.27                 | 20.42   | 7.86                             |
|                                                                                            | 10MHz           |                 | 50            | 0         | QPSK       | 35.37                 | 21.54   | 6.84                             |
|                                                                                            |                 |                 |               |           | 16QAM      | 35.36                 | 20.53   | 7.84                             |
|                                                                                            | 15MHz           |                 | 75            | 0         | QPSK       | 35.28                 | 21.42   | 6.87                             |
|                                                                                            |                 |                 |               |           | 16QAM      | 35.49                 | 20.44   | 8.06                             |
|                                                                                            | 20MHz           |                 | 100           | 0         | QPSK       | 35.14                 | 21.38   | 6.77                             |
|                                                                                            |                 |                 |               |           | 16QAM      | 35.00                 | 20.39   | 7.62                             |
| Duty Cycle Correction Factor (dB) =                                                        |                 |                 | 6.99          |           |            |                       |         |                                  |
| Peak-to-Average Power Ratio= Peak Reading - Average Reading - Duty Cycle Correction Factor |                 |                 |               |           |            |                       |         |                                  |

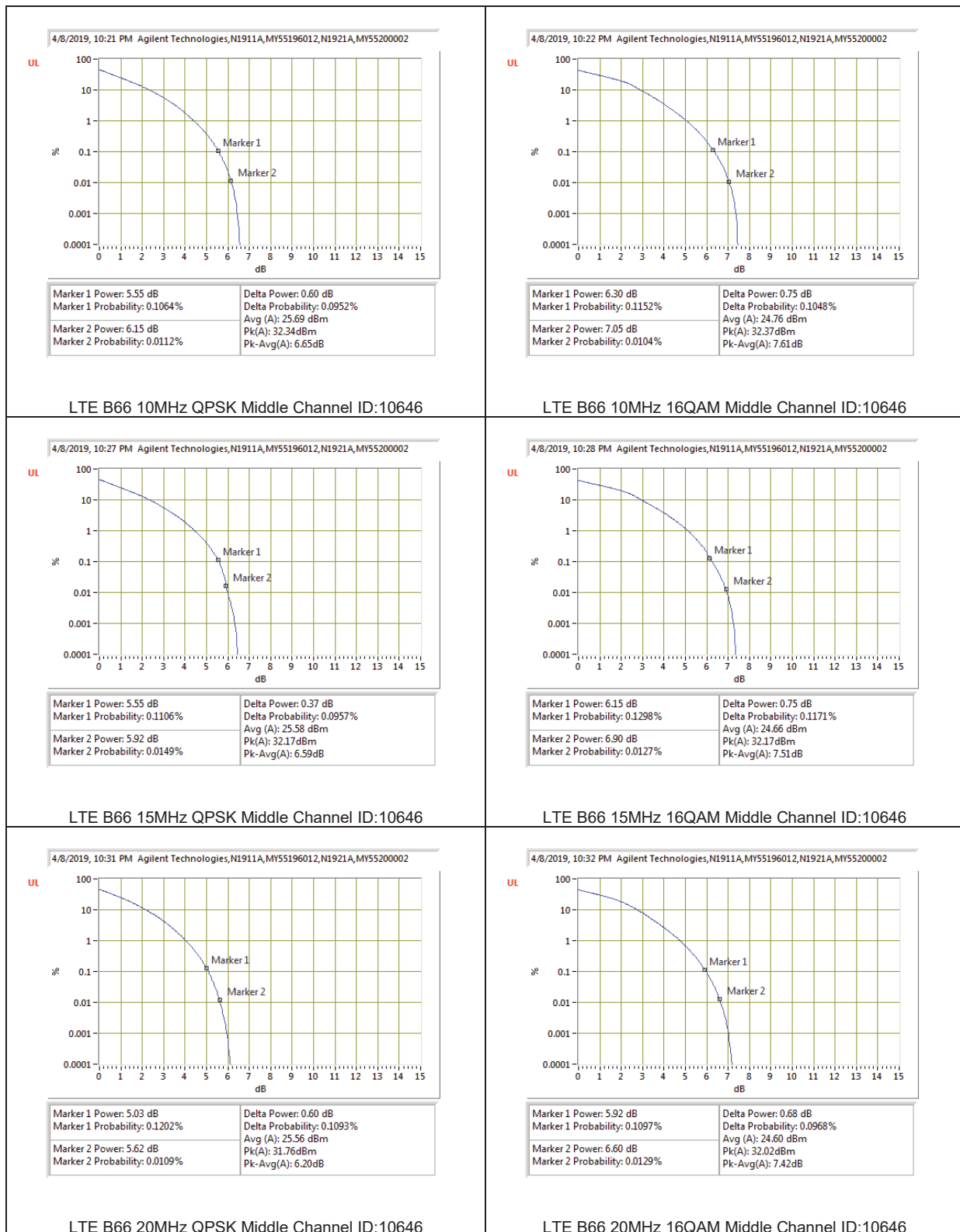
### 8.5.11. LTE BAND 48

|            |       |              |        |
|------------|-------|--------------|--------|
| <b>ID:</b> | 39004 | <b>Date:</b> | 6/7/19 |
|------------|-------|--------------|--------|

| Band                                                                                       | Bandwidth (MHz) | Frequency (MHz) | RB Allocation | RB OffSet | Modulation | Conducted Power (dBm) |         | Peak-to-Average Power Ratio (dB) |
|--------------------------------------------------------------------------------------------|-----------------|-----------------|---------------|-----------|------------|-----------------------|---------|----------------------------------|
|                                                                                            |                 |                 |               |           |            | Peak                  | Average |                                  |
| Band 48                                                                                    | 5MHz            | 3625.0          | 25            | 0         | QPSK       | 30.63                 | 15.92   | 7.72                             |
|                                                                                            |                 |                 |               |           | 16QAM      | 30.66                 | 14.83   | 8.84                             |
|                                                                                            | 10MHz           |                 | 50            | 0         | QPSK       | 30.40                 | 15.97   | 7.44                             |
|                                                                                            |                 |                 |               |           | 16QAM      | 30.51                 | 14.9    | 8.62                             |
|                                                                                            | 15MHz           |                 | 75            | 0         | QPSK       | 30.24                 | 15.87   | 7.38                             |
|                                                                                            |                 |                 |               |           | 16QAM      | 30.25                 | 14.85   | 8.41                             |
|                                                                                            | 20MHz           |                 | 100           | 0         | QPSK       | 30.36                 | 15.97   | 7.40                             |
|                                                                                            |                 |                 |               |           | 16QAM      | 30.46                 | 14.95   | 8.52                             |
| Duty Cycle Correction Factor (dB) =                                                        |                 |                 | 6.99          |           |            |                       |         |                                  |
| Peak-to-Average Power Ratio= Peak Reading - Average Reading - Duty Cycle Correction Factor |                 |                 |               |           |            |                       |         |                                  |

## 8.5.12. LTE BAND 66





## 9. RADIATED TEST RESULTS

### RULE PART(S)

FCC: §2.1053, §22.917, §24.238, §27.53, §90.669, §90.691, and §96.41

### LIMIT

FCC: §22.917(a), §24.238(a), §27.53 (g), (h), §90.691

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10 \log (P)$  dB.

FCC: §27.53 (Band 13)

(c) The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10 \log (P)$  dB.

(f) Emissions in the band 1559-1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals. (-70 dBW/MHz = -40dBm/MHz).

FCC: §90.669 Emission limits. (Band 26)

(a) On any frequency in an MTA licensee's spectrum block that is adjacent to a non-MTA frequency, the power of any emission shall be attenuated below the transmitter power (P) by at least 43 plus  $10 \log_{10}(P)$  decibels or 80 decibels, whichever is the lesser attenuation.

FCC: §27.53 (a) (Band 30)

For mobile and portable stations operating in the 2305-2315 MHz: by a factor of not less than  $43 + 10 \log (P)$  dB on all frequencies between 2360 and 2365 MHz, and not less than  $70 + 10 \log (P)$  dB above 2365 MHz.

FCC: §27.53 (m) (Band 7, 41)

At least  $55 + 10 \log (P)$  dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section.

FCC: §96.41 (Band 48)

(e) 3.5 GHz Emissions and Interference Limits—

(2) Additional protection levels. Notwithstanding paragraph (d)(1) of this section, the conducted power of any emissions below 3530 MHz or above 3720 MHz shall not exceed -40dBm/MHz.

### TEST PROCEDURE

KDB 971168 D01/D02 v02r01

### **MODES TESTED**

- LTE Band 2
- LTE Band 5
- LTE Band 7
- LTE Band 12
- LTE Band 13
- LTE Band 17
- LTE Band 25
- LTE Band 26
- LTE Band 30
- LTE Band 41
- LTE Band 48
- LTE Band 66

### **RESULTS**

For LTE Band 13, no narrow band emissions were observed in the 1559-1610MHz band, so the wide band limit of -70dBW/MHz was applied.

## 9.1. FIELD STRENGTH OF SPURIOUS RADIATION, ANT 1

### 9.1.1. LTE BAND 2

|                |                  |
|----------------|------------------|
| Company:       |                  |
| Project #:     | 12607353         |
| Date:          | 5/16/2019        |
| Test Engineer: | 39006            |
| Configuration: | EUT Only         |
| Mode:          | LTE 2 QPSK 20MHz |
| Chamber #:     | Chamber A        |

| Frequency (GHz)       | Meter Reading (dBm) | Det | AF T346 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|-----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 1860MHz  |                     |     |                |              |              |                         |                 |             |          |
| 3.816                 | -65.57              | Pk  | 33.4           | -29.5        | 11.5         | -50.17                  | -13             | -37.17      | H        |
| 5.101                 | -67.46              | Pk  | 34.2           | -28.4        | 11.3         | -50.36                  | -13             | -37.36      | H        |
| 3.839                 | -71.35              | Pk  | 33.4           | -29.6        | 11           | -56.55                  | -13             | -43.55      | V        |
| 5.107                 | -72.56              | Pk  | 34.2           | -28.3        | 11.3         | -55.36                  | -13             | -42.36      | V        |
| 5.627                 | -67.96              | Pk  | 35             | -28          | 10.4         | -50.56                  | -13             | -37.56      | H        |
| 5.651                 | -67.65              | Pk  | 34.9           | -28          | 11           | -49.75                  | -13             | -36.75      | V        |
| Mid Channel, 1880MHz  |                     |     |                |              |              |                         |                 |             |          |
| 3.857                 | -68.74              | Pk  | 33.5           | -29.7        | 12           | -52.94                  | -13             | -39.94      | H        |
| 3.358                 | -69.22              | Pk  | 32.8           | -30.1        | 11.6         | -54.92                  | -13             | -41.92      | V        |
| 3.848                 | -66.24              | Pk  | 33.4           | -29.6        | 10.9         | -51.54                  | -13             | -38.54      | V        |
| 7.073                 | -69.56              | Pk  | 35.4           | -24.8        | 10.7         | -48.26                  | -13             | -35.26      | H        |
| 9.683                 | -71.12              | Pk  | 36.9           | -22          | 11.2         | -45.02                  | -13             | -32.02      | V        |
| 10.055                | -72                 | Pk  | 36.9           | -22.1        | 10.3         | -46.9                   | -13             | -33.9       | H        |
| High Channel, 1900MHz |                     |     |                |              |              |                         |                 |             |          |
| 3.824                 | -65.62              | Pk  | 33.4           | -29.2        | 11.4         | -50.02                  | -13             | -37.02      | H        |
| 5.133                 | -67.37              | Pk  | 34.3           | -28.6        | 10.7         | -50.97                  | -13             | -37.97      | H        |
| 3.826                 | -65.82              | Pk  | 33.4           | -29.1        | 11.1         | -50.42                  | -13             | -37.42      | V        |
| 5.105                 | -66.78              | Pk  | 34.2           | -28.4        | 11.3         | -49.68                  | -13             | -36.68      | V        |
| 9.714                 | -71.73              | Pk  | 36.9           | -22.3        | 10.7         | -46.43                  | -13             | -33.43      | H        |
| 9.745                 | -70.96              | Pk  | 36.9           | -22.3        | 11.1         | -45.26                  | -13             | -32.26      | V        |

Pk - Peak detector

|                |                   |
|----------------|-------------------|
| Company:       |                   |
| Project #:     | 12607353          |
| Date:          | 5/16/2019         |
| Test Engineer: | 39006             |
| Configuration: | EUT Only          |
| Mode:          | LTE 2 16QAM 20MHz |
| Chamber #:     | Chamber A         |

| Frequency (GHz)       | Meter Reading (dBm) | Det | AF T346 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|-----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 1860MHz  |                     |     |                |              |              |                         |                 |             |          |
| 3.857                 | -65.97              | Pk  | 33.5           | -29.7        | 12           | -50.17                  | -13             | -37.17      | H        |
| 11.071                | -71.34              | Pk  | 37.9           | -20.9        | 10.5         | -43.84                  | -13             | -30.84      | H        |
| 3.87                  | -66.59              | Pk  | 33.4           | -29.4        | 11.7         | -50.89                  | -13             | -37.89      | V        |
| 11.072                | -72.08              | Pk  | 37.9           | -20.9        | 10.6         | -44.48                  | -13             | -31.48      | V        |
| 6.5                   | -68.85              | Pk  | 35.6           | -26.1        | 10.9         | -48.45                  | -13             | -35.45      | H        |
| 6.5                   | -69.21              | Pk  | 35.6           | -26.1        | 11.3         | -48.41                  | -13             | -35.41      | V        |
| Mid Channel, 1880MHz  |                     |     |                |              |              |                         |                 |             |          |
| 4.94                  | -67.52              | Pk  | 34             | -28.5        | 10.7         | -51.32                  | -13             | -38.32      | H        |
| 7.681                 | -69.97              | Pk  | 35.6           | -24.5        | 11.2         | -47.67                  | -13             | -34.67      | H        |
| 3.85                  | -66.2               | Pk  | 33.4           | -29.7        | 10.9         | -51.6                   | -13             | -38.6       | V        |
| 10.979                | -71.33              | Pk  | 37.9           | -21.1        | 10.9         | -43.63                  | -13             | -30.63      | V        |
| 3.133                 | -67.18              | Pk  | 33.1           | -30.5        | 11.5         | -53.08                  | -13             | -40.08      | H        |
| 6.451                 | -68.77              | Pk  | 35.5           | -26.1        | 11.1         | -48.27                  | -13             | -35.27      | V        |
| High Channel, 1900MHz |                     |     |                |              |              |                         |                 |             |          |
| 3.842                 | -65.17              | Pk  | 33.4           | -29.6        | 11.1         | -50.27                  | -13             | -37.27      | H        |
| 3.759                 | -65.77              | Pk  | 33.1           | -29.7        | 11.1         | -51.27                  | -13             | -38.27      | V        |
| 6.01                  | -69.14              | Pk  | 35.1           | -27.3        | 11.3         | -50.04                  | -13             | -37.04      | H        |
| 6.019                 | -69.42              | Pk  | 35.2           | -27.2        | 11.1         | -50.32                  | -13             | -37.32      | V        |
| 9.78                  | -70.72              | Pk  | 36.9           | -22.4        | 11           | -45.22                  | -13             | -32.22      | V        |
| 9.801                 | -71.18              | Pk  | 36.9           | -22.3        | 10.9         | -45.68                  | -13             | -32.68      | H        |

Pk - Peak detector

### 9.1.2. LTE BAND 5

|                |                  |
|----------------|------------------|
| Company:       |                  |
| Project #:     | 12607353         |
| Date:          | 4/9/2019         |
| Test Engineer: | 12501            |
| Configuration: | EUT Only         |
| Mode:          | LTE 5 QPSK 10MHz |
| Chamber #:     | Chamber A        |

| Frequency (GHz)       | Meter Reading (dBm) | Det | AF T346 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|-----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 829MHz   |                     |     |                |              |              |                         |                 |             |          |
| 1.663                 | -65.88              | Pk  | 28.8           | -32.4        | 12.2         | -57.28                  | -13             | -44.28      | H        |
| 1.716                 | -66.09              | Pk  | 29.3           | -32.3        | 13.3         | -55.79                  | -13             | -42.79      | V        |
| 2.563                 | -66.87              | Pk  | 32.3           | -31.3        | 12.2         | -53.67                  | -13             | -40.67      | H        |
| 2.631                 | -65.49              | Pk  | 32.4           | -31.1        | 12.9         | -51.29                  | -13             | -38.29      | V        |
| 3.296                 | -67.39              | Pk  | 32.9           | -30.3        | 11.4         | -53.39                  | -13             | -40.39      | H        |
| 3.296                 | -66.76              | Pk  | 32.9           | -30.3        | 11.2         | -52.96                  | -13             | -39.96      | V        |
| Mid Channel, 836.5MHz |                     |     |                |              |              |                         |                 |             |          |
| 1.684                 | -65.8               | Pk  | 28.7           | -32.4        | 12.3         | -57.2                   | -13             | -44.2       | H        |
| 1.717                 | -65.45              | Pk  | 29.3           | -32.3        | 13.6         | -54.85                  | -13             | -41.85      | V        |
| 2.396                 | -67.19              | Pk  | 32             | -31.4        | 13.2         | -53.39                  | -13             | -40.39      | V        |
| 2.514                 | -66.54              | Pk  | 32.3           | -31.5        | 11.5         | -54.24                  | -13             | -41.24      | H        |
| 3.229                 | -67.58              | Pk  | 32.9           | -30.5        | 11.1         | -54.08                  | -13             | -41.08      | V        |
| 3.245                 | -67.33              | Pk  | 32.9           | -30.6        | 11.2         | -53.83                  | -13             | -40.83      | H        |
| High Channel, 844MHz  |                     |     |                |              |              |                         |                 |             |          |
| 1.685                 | -61.58              | Pk  | 28.7           | -32.4        | 12.3         | -52.98                  | -13             | -39.98      | H        |
| 1.717                 | -66.02              | Pk  | 29.3           | -32.3        | 13.5         | -55.52                  | -13             | -42.52      | V        |
| 2.531                 | -67.26              | Pk  | 32.3           | -31.3        | 12.1         | -54.16                  | -13             | -41.16      | H        |
| 2.563                 | -66.36              | Pk  | 32.3           | -31.3        | 11.8         | -53.56                  | -13             | -40.56      | V        |
| 3.293                 | -66.61              | Pk  | 32.9           | -30.3        | 11.2         | -52.81                  | -13             | -39.81      | H        |
| 3.297                 | -67.12              | Pk  | 32.9           | -30.3        | 11.2         | -53.32                  | -13             | -40.32      | V        |

Pk - Peak detector

|                |                   |
|----------------|-------------------|
| Company:       |                   |
| Project #:     | 12607353          |
| Date:          | 4/9/2019          |
| Test Engineer: | 12501             |
| Configuration: | EUT Only          |
| Mode:          | LTE 5 16QAM 10MHz |
| Chamber #:     | Chamber A         |

| Frequency (GHz)       | Meter Reading (dBm) | Det | AF T346 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|-----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 829MHz   |                     |     |                |              |              |                         |                 |             |          |
| 1.709                 | -66.18              | Pk  | 29.2           | -32.3        | 13.1         | -56.18                  | -13             | -43.18      | V        |
| 1.729                 | -66.39              | Pk  | 29.5           | -32.3        | 12.3         | -56.89                  | -13             | -43.89      | H        |
| 2.529                 | -66.64              | Pk  | 32.3           | -31.4        | 12.2         | -53.54                  | -13             | -40.54      | H        |
| 2.58                  | -66.86              | Pk  | 32.3           | -31.3        | 12.1         | -53.76                  | -13             | -40.76      | V        |
| 3.295                 | -67.67              | Pk  | 32.9           | -30.3        | 11.2         | -53.87                  | -13             | -40.87      | V        |
| 3.297                 | -67.28              | Pk  | 32.9           | -30.4        | 11.4         | -53.38                  | -13             | -40.38      | H        |
| Mid Channel, 836.5MHz |                     |     |                |              |              |                         |                 |             |          |
| 1.697                 | -69.19              | Pk  | 28.8           | -32.3        | 12.6         | -60.09                  | -13             | -47.09      | H        |
| 1.68                  | -60.27              | Pk  | 28.7           | -32.4        | 10.9         | -53.07                  | -13             | -40.07      | V        |
| 2.394                 | -70.5               | Pk  | 32             | -31.4        | 13.2         | -56.7                   | -13             | -43.7       | V        |
| 2.462                 | -70.02              | Pk  | 32.4           | -31.6        | 12.3         | -56.92                  | -13             | -43.92      | H        |
| 3.278                 | -70                 | Pk  | 32.9           | -30.5        | 10.8         | -56.8                   | -13             | -43.8       | V        |
| 3.312                 | -70.84              | Pk  | 32.8           | -30.3        | 11.5         | -56.84                  | -13             | -43.84      | H        |
| High Channel, 844MHz  |                     |     |                |              |              |                         |                 |             |          |
| 1.694                 | -59.54              | Pk  | 28.7           | -32.3        | 12.4         | -50.74                  | -13             | -37.74      | V        |
| 3.346                 | -70.13              | Pk  | 32.9           | -30.2        | 11           | -56.43                  | -13             | -43.43      | V        |
| 1.747                 | -67.13              | Pk  | 29.7           | -32.2        | 11.9         | -57.73                  | -13             | -44.73      | H        |
| 2.531                 | -65.66              | Pk  | 32.3           | -31.4        | 12.1         | -52.66                  | -13             | -39.66      | V        |
| 2.583                 | -67.87              | Pk  | 32.3           | -31.3        | 12.3         | -54.57                  | -13             | -41.57      | H        |
| 3.449                 | -68.6               | Pk  | 32.8           | -30.1        | 11.6         | -54.3                   | -13             | -41.3       | H        |

Pk - Peak detector

### 9.1.3. LTE BAND 7

|                |                  |
|----------------|------------------|
| Company:       |                  |
| Project #:     | 12607353         |
| Date:          | 5/20/2019        |
| Test Engineer: | 39006            |
| Configuration: | EUT Only         |
| Mode:          | LTE 7 QPSK 20MHz |
| Chamber #:     | Chamber A        |

| Frequency (GHz)       | Meter Reading (dBm) | Det | AF T346 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|-----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 2510MHz  |                     |     |                |              |              |                         |                 |             |          |
| 3.854                 | -66.04              | Pk  | 33.6           | -29.7        | 11.6         | -50.54                  | -25             | -25.54      | H        |
| 10.787                | -71.98              | Pk  | 37.8           | -20.5        | 10.8         | -43.88                  | -25             | -18.88      | H        |
| 3.848                 | -66.47              | Pk  | 33.6           | -29.6        | 10.9         | -51.57                  | -25             | -26.57      | V        |
| 10.993                | -71.63              | Pk  | 37.9           | -21.1        | 10.9         | -43.93                  | -25             | -18.93      | V        |
| 6.387                 | -68.82              | Pk  | 35.6           | -26.2        | 10.6         | -48.82                  | -25             | -23.82      | V        |
| 6.454                 | -69.47              | Pk  | 35.5           | -26          | 10.8         | -49.17                  | -25             | -24.17      | H        |
| Mid Channel, 2535MHz  |                     |     |                |              |              |                         |                 |             |          |
| 4.328                 | -67.41              | Pk  | 33.9           | -28.8        | 10.8         | -51.51                  | -25             | -26.51      | H        |
| 11.569                | -73.04              | Pk  | 38.3           | -20.9        | 10.9         | -44.74                  | -25             | -19.74      | H        |
| 11.437                | -72.22              | Pk  | 38.1           | -20.8        | 10.9         | -44.02                  | -25             | -19.02      | V        |
| 4.436                 | -66.99              | Pk  | 33.9           | -29.1        | 11.6         | -50.59                  | -25             | -25.59      | V        |
| 7.777                 | -70.15              | Pk  | 35.8           | -24.5        | 11           | -47.85                  | -25             | -22.85      | H        |
| 7.781                 | -70.02              | Pk  | 35.8           | -24.4        | 11.1         | -47.52                  | -25             | -22.52      | V        |
| High Channel, 2560MHz |                     |     |                |              |              |                         |                 |             |          |
| 3.889                 | -65.85              | Pk  | 33.6           | -29.3        | 11.3         | -50.25                  | -25             | -25.25      | H        |
| 3.869                 | -67.88              | Pk  | 33.6           | -29.4        | 11.6         | -52.08                  | -25             | -27.08      | V        |
| 12.548                | -72.89              | Pk  | 39.1           | -20.9        | 10.7         | -43.99                  | -25             | -18.99      | V        |
| 6.452                 | -69.28              | Pk  | 35.5           | -26          | 10.8         | -48.98                  | -25             | -23.98      | H        |
| 6.507                 | -68.86              | Pk  | 35.6           | -26          | 11.3         | -47.96                  | -25             | -22.96      | V        |
| 12.779                | -72.37              | Pk  | 39.3           | -21          | 10.8         | -43.27                  | -25             | -18.27      | H        |

Pk - Peak detector

|                |                   |
|----------------|-------------------|
| Company:       |                   |
| Project #:     | 12607353          |
| Date:          | 5/20/2019         |
| Test Engineer: | 39006             |
| Configuration: | EUT Only          |
| Mode:          | LTE 7 16QAM 20MHz |
| Chamber #:     | Chamber A         |

| Frequency (GHz)       | Meter Reading (dBm) | Det | AF T346 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|-----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 2510MHz  |                     |     |                |              |              |                         |                 |             |          |
| 3.893                 | -65.41              | Pk  | 33.6           | -29.4        | 11.4         | -49.81                  | -25             | -24.81      | H        |
| 3.893                 | -65.75              | Pk  | 33.6           | -29.4        | 11.2         | -50.35                  | -25             | -25.35      | V        |
| 5.957                 | -68.57              | Pk  | 35.3           | -27.2        | 11.1         | -49.37                  | -25             | -24.37      | V        |
| 6.016                 | -68.37              | Pk  | 35.5           | -27.3        | 11.2         | -48.97                  | -25             | -23.97      | H        |
| 9.665                 | -70.97              | Pk  | 36.9           | -22.1        | 11           | -45.17                  | -25             | -20.17      | V        |
| 9.669                 | -70.98              | Pk  | 36.9           | -22          | 10.9         | -45.18                  | -25             | -20.18      | H        |
| Mid Channel, 2535MHz  |                     |     |                |              |              |                         |                 |             |          |
| 3.894                 | -65.83              | Pk  | 33.6           | -29.5        | 11.3         | -50.43                  | -25             | -25.43      | H        |
| 12.522                | -72.08              | Pk  | 39.1           | -20.7        | 10.6         | -43.08                  | -25             | -18.08      | H        |
| 3.839                 | -66.66              | Pk  | 33.5           | -29.6        | 11           | -51.76                  | -25             | -26.76      | V        |
| 12.477                | -72.23              | Pk  | 39.1           | -20.2        | 10.3         | -43.03                  | -25             | -18.03      | V        |
| 7.12                  | -68.89              | Pk  | 35.6           | -25.2        | 10.5         | -47.99                  | -25             | -22.99      | H        |
| 7.171                 | -69.04              | Pk  | 35.6           | -25.1        | 10.7         | -47.84                  | -25             | -22.84      | V        |
| High Channel, 2560MHz |                     |     |                |              |              |                         |                 |             |          |
| 3.891                 | -65.95              | Pk  | 33.6           | -29.4        | 11.3         | -50.45                  | -25             | -25.45      | H        |
| 3.826                 | -66.17              | Pk  | 33.5           | -29.1        | 11.1         | -50.67                  | -25             | -25.67      | V        |
| 12.508                | -73.14              | Pk  | 39.1           | -20.4        | 10.8         | -43.64                  | -25             | -18.64      | V        |
| 6.441                 | -68.23              | Pk  | 35.5           | -26.2        | 10.5         | -48.43                  | -25             | -23.43      | H        |
| 6.443                 | -68.77              | Pk  | 35.5           | -26.2        | 10.9         | -48.57                  | -25             | -23.57      | V        |
| 12.794                | -72.79              | Pk  | 39.3           | -20.9        | 10.8         | -43.59                  | -25             | -18.59      | H        |

Pk - Peak detector

### 9.1.4. LTE BAND 12

|                |                   |
|----------------|-------------------|
| Company:       |                   |
| Project #:     | 12607353          |
| Date:          | 4/9/2019          |
| Test Engineer: | 31300             |
| Configuration: | EUT Only          |
| Mode:          | LTE 12 QPSK 10MHz |
| Chamber #:     | Chamber A         |

| Frequency (GHz)       | Meter Reading (dBm) | Det | AF T346 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|-----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 704MHz   |                     |     |                |              |              |                         |                 |             |          |
| 8.085                 | -69.46              | Pk  | 35.9           | -24.1        | 11.2         | -46.46                  | -13             | -33.46      | H        |
| 7.706                 | -70.17              | Pk  | 35.8           | -24.6        | 11.2         | -47.77                  | -13             | -34.77      | V        |
| 1.939                 | -66.69              | Pk  | 31.1           | -31.9        | 12.6         | -54.89                  | -13             | -41.89      | V        |
| 2.099                 | -63.03              | Pk  | 31.3           | -32          | 12           | -51.73                  | -13             | -38.73      | H        |
| 2.099                 | -43.18              | Pk  | 31.3           | -31.9        | 11           | -32.78                  | -13             | -19.78      | V        |
| 6.324                 | -69.06              | Pk  | 35.6           | -26.3        | 10.7         | -49.06                  | -13             | -36.06      | H        |
| Mid Channel, 707.5MHz |                     |     |                |              |              |                         |                 |             |          |
| 1.405                 | -65.97              | Pk  | 28.5           | -32.6        | 13           | -57.07                  | -13             | -44.07      | H        |
| 2.783                 | -67.31              | Pk  | 32.4           | -31.1        | 11.6         | -54.41                  | -13             | -41.41      | H        |
| 1.404                 | -65.82              | Pk  | 28.5           | -32.6        | 12.5         | -57.42                  | -13             | -44.42      | V        |
| 2.766                 | -66.76              | Pk  | 32.4           | -31.1        | 11.8         | -53.66                  | -13             | -40.66      | V        |
| 2.122                 | -66.26              | Pk  | 31.3           | -31.8        | 13.1         | -53.66                  | -13             | -40.66      | H        |
| 2.124                 | -65.69              | Pk  | 31.3           | -31.7        | 12.9         | -53.19                  | -13             | -40.19      | V        |
| High Channel, 711MHz  |                     |     |                |              |              |                         |                 |             |          |
| 1.151                 | -64.72              | Pk  | 27.5           | -33.1        | 15.2         | -55.12                  | -13             | -42.12      | H        |
| 5.099                 | -66.1               | Pk  | 34.2           | -28.4        | 11.4         | -48.9                   | -13             | -35.9       | V        |
| 2.119                 | -64.92              | Pk  | 31.3           | -31.8        | 12.4         | -53.02                  | -13             | -40.02      | V        |
| 2.12                  | -64.7               | Pk  | 31.3           | -31.8        | 13.1         | -52.1                   | -13             | -39.1       | H        |
| 2.407                 | -66.15              | Pk  | 32.1           | -31.3        | 12.3         | -53.05                  | -13             | -40.05      | V        |
| 7.879                 | -69.81              | Pk  | 35.9           | -24.5        | 11.2         | -47.21                  | -13             | -34.21      | H        |

Pk - Peak detector

|                |                    |
|----------------|--------------------|
| Company:       |                    |
| Project #:     | 12607353           |
| Date:          | 4/9/2019           |
| Test Engineer: | 31300              |
| Configuration: | EUT Only           |
| Mode:          | LTE 12 16QAM 10MHz |
| Chamber #:     | Chamber A          |

| Frequency (GHz)                  | Meter Reading (dBm) | Det | AF T346 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|----------------------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, Low Channel, 704MHz |                     |     |                |              |              |                         |                 |             |          |
| 1.352                            | -65.14              | Pk  | 29.1           | -32.8        | 12.2         | -56.64                  | -13             | -43.64      | H        |
| 1.936                            | -65.34              | Pk  | 31             | -31.9        | 11.8         | -54.44                  | -13             | -41.44      | V        |
| 1.967                            | -65.19              | Pk  | 31.5           | -32.1        | 11.5         | -54.29                  | -13             | -41.29      | H        |
| 3.056                            | -67.11              | Pk  | 33             | -30.8        | 11.9         | -53.01                  | -13             | -40.01      | V        |
| 5.235                            | -67.21              | Pk  | 34.3           | -28.3        | 11.3         | -49.91                  | -13             | -36.91      | H        |
| 7.244                            | -73.22              | Pk  | 35.6           | -25          | 11.2         | -51.42                  | -13             | -38.42      | V        |
| Mid Channel, 707.5MHz            |                     |     |                |              |              |                         |                 |             |          |
| 1.421                            | -66.3               | Pk  | 28.3           | -32.5        | 10.7         | -59.8                   | -13             | -46.8       | H        |
| 2.802                            | -67.09              | Pk  | 32.4           | -31          | 12.3         | -53.39                  | -13             | -40.39      | H        |
| 1.426                            | -76.29              | Av  | 28.2           | -32.6        | 10.1         | -70.59                  | -13             | -57.59      | V        |
| 2.819                            | -76.66              | Av  | 32.4           | -30.8        | 12.2         | -62.86                  | -13             | -49.86      | V        |
| 2.124                            | -59.19              | Pk  | 31.3           | -31.7        | 13           | -46.59                  | -13             | -33.59      | H        |
| 2.19                             | -76.84              | Av  | 31.4           | -31.5        | 12.5         | -64.44                  | -13             | -51.44      | V        |
| High Channel, 711MHz             |                     |     |                |              |              |                         |                 |             |          |
| 4.231                            | -67                 | Pk  | 33.7           | -29.2        | 11.7         | -50.8                   | -13             | -37.8       | H        |
| 11.043                           | -71.8               | Pk  | 37.9           | -21          | 10.6         | -44.3                   | -13             | -31.3       | H        |
| 4.848                            | -67.59              | Pk  | 34.1           | -28.6        | 11           | -51.09                  | -13             | -38.09      | V        |
| 1.871                            | -65.41              | Pk  | 30.9           | -32          | 11.9         | -54.61                  | -13             | -41.61      | H        |
| 2.136                            | -66                 | Pk  | 31.3           | -31.8        | 13.1         | -53.4                   | -13             | -40.4       | V        |
| 2.393                            | -66.1               | Pk  | 32             | -31.4        | 13.1         | -52.4                   | -13             | -39.4       | V        |

Pk - Peak detector

### 9.1.5. LTE BAND 13

|                |                   |
|----------------|-------------------|
| Project #:     | 12607353          |
| Date:          | 4/10/2019         |
| Test Engineer: | 31300             |
| Configuration: | EUT Only          |
| Mode:          | LTE 13 QPSK 10MHz |
| Chamber #:     | Chamber A         |

| Frequency (GHz)     | Meter Reading (dBm) | Det | AF T346 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|---------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Mid Channel, 782MHz |                     |     |                |              |              |                         |                 |             |          |
| 1.589               | -69.73              | Pk  | 28.1           | -32.5        | 11.7         | -62.43                  | -40             | -22.43      | H        |
| 2.333               | -64.95              | Pk  | 31.7           | -31.6        | 12.5         | -52.35                  | -13             | -39.35      | H        |
| 4.039               | -67.15              | Pk  | 33.7           | -29.6        | 11.2         | -51.85                  | -13             | -38.85      | H        |
| 1.58                | -69.04              | Pk  | 28.1           | -32.4        | 12.3         | -61.04                  | -40             | -21.04      | V        |
| 3.878               | -65.34              | Pk  | 33.6           | -29.4        | 12           | -49.14                  | -13             | -36.14      | V        |
| 5.858               | -68.14              | Pk  | 35.1           | -27          | 10.7         | -49.34                  | -13             | -36.34      | V        |

|                |                    |
|----------------|--------------------|
| Project #:     | 12607353           |
| Date:          | 4/10/2019          |
| Test Engineer: | 31300              |
| Configuration: | EUT Only           |
| Mode:          | LTE 13 16QAM 10MHz |
| Chamber #:     | Chamber A          |

| Frequency (GHz)     | Meter Reading (dBm) | Det | AF T346 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|---------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Mid Channel, 782MHz |                     |     |                |              |              |                         |                 |             |          |
| 1.567               | -69.68              | Pk  | 28.1           | -32.4        | 11.9         | -62.08                  | -40             | -22.08      | H        |
| 3.88                | -65.1               | Pk  | 33.6           | -29.4        | 11.8         | -49.1                   | -13             | -36.1       | V        |
| 10.855              | -71.32              | Pk  | 37.9           | -20.4        | 11.3         | -42.52                  | -13             | -29.52      | V        |
| 1.572               | -68.88              | Pk  | 28.1           | -32.5        | 12.1         | -61.18                  | -40             | -21.18      | V        |
| 2.072               | -65.79              | Pk  | 31.2           | -31.7        | 13           | -53.29                  | -13             | -40.29      | H        |
| 5.22                | -67.71              | Pk  | 34.3           | -28.2        | 11.1         | -50.51                  | -13             | -37.51      | H        |

Pk - Peak detector

### 9.1.6. LTE BAND 17

|                |                   |
|----------------|-------------------|
| Project #:     | 12607353          |
| Date:          | 5/22/2019         |
| Test Engineer: | 39006             |
| Configuration: | EUT Only          |
| Mode:          | LTE 17 QPSK 10MHz |
| Chamber #:     | Chamber B         |

| Frequency (GHz)     | Meter Reading (dBm) | Det | AF T344 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|---------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Mid Channel, 710MHz |                     |     |                |              |              |                         |                 |             |          |
| 1.387               | -71.04              | Pk  | 29.4           | -32.7        | 12.1         | -62.24                  | -13             | -49.24      | V        |
| 1.394               | -69.85              | Pk  | 29.1           | -32.6        | 13.1         | -60.25                  | -13             | -47.25      | H        |
| 2.137               | -69.98              | Pk  | 31.3           | -31.8        | 13           | -57.48                  | -13             | -44.48      | V        |
| 2.142               | -71.13              | Pk  | 31.3           | -31.7        | 12           | -59.53                  | -13             | -46.53      | H        |
| 2.871               | -69.08              | Pk  | 32.1           | -30.6        | 11.7         | -55.88                  | -13             | -42.88      | H        |
| 2.876               | -70.98              | Pk  | 32.2           | -30.6        | 12.6         | -56.78                  | -13             | -43.78      | V        |

|                |                    |
|----------------|--------------------|
| Project #:     | 12607353           |
| Date:          | 5/22/2019          |
| Test Engineer: | 39006              |
| Configuration: | EUT Only           |
| Mode:          | LTE 17 16QAM 10MHz |
| Chamber #:     | Chamber B          |

| Frequency (GHz)     | Meter Reading (dBm) | Det | AF T344 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|---------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Mid Channel, 710MHz |                     |     |                |              |              |                         |                 |             |          |
| 1.385               | -71.81              | Pk  | 29.4           | -32.6        | 12.3         | -62.71                  | -13             | -49.71      | H        |
| 1.387               | -71.65              | Pk  | 29.4           | -32.7        | 12.1         | -62.85                  | -13             | -49.85      | V        |
| 2.125               | -70.14              | Pk  | 31.3           | -31.7        | 12.9         | -57.64                  | -13             | -44.64      | H        |
| 2.125               | -69.79              | Pk  | 31.3           | -31.6        | 13.1         | -56.99                  | -13             | -43.99      | V        |
| 2.791               | -70.88              | Pk  | 32.6           | -31.1        | 11.7         | -57.68                  | -13             | -44.68      | V        |
| 2.808               | -70.72              | Pk  | 32.4           | -30.9        | 12.4         | -56.82                  | -13             | -43.82      | H        |

Pk - Peak detector

### 9.1.7. LTE BAND 25

|                |                   |
|----------------|-------------------|
| Company:       |                   |
| Project #:     | 12607353          |
| Date:          | 4/9/2019          |
| Test Engineer: | 31300             |
| Configuration: | EUT Only          |
| Mode:          | LTE 25 QPSK 20MHz |
| Chamber #:     | Chamber B         |

| Frequency (GHz)        | Meter Reading (dBm) | Det | AF T344 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|------------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 1860MHz   |                     |     |                |              |              |                         |                 |             |          |
| 3.702                  | -64.11              | Pk  | 33.1           | -29.8        | 11.2         | -49.61                  | -13             | -36.61      | H        |
| 3.702                  | -64.54              | Pk  | 33.1           | -29.8        | 11.3         | -49.94                  | -13             | -36.94      | V        |
| 4.864                  | -66.62              | Pk  | 34.1           | -28.4        | 11.3         | -49.62                  | -13             | -36.62      | V        |
| 10.925                 | -71.41              | Pk  | 37.9           | -20.9        | 11.1         | -43.31                  | -13             | -30.31      | V        |
| 5.553                  | -62.14              | Pk  | 34.8           | -28          | 10.8         | -44.54                  | -13             | -31.54      | H        |
| 13.638                 | -70.41              | Pk  | 38.8           | -20.8        | 10.8         | -41.61                  | -13             | -28.61      | H        |
| Mid Channel, 1882.5MHz |                     |     |                |              |              |                         |                 |             |          |
| 3.609                  | -65.98              | Pk  | 33.1           | -29.9        | 11.1         | -51.68                  | -13             | -38.68      | H        |
| 4.852                  | -66.6               | Pk  | 34.1           | -28.6        | 11.3         | -49.8                   | -13             | -36.8       | H        |
| 4.225                  | -65.7               | Pk  | 33.6           | -29.4        | 11.1         | -50.4                   | -13             | -37.4       | V        |
| 2.989                  | -66.12              | Pk  | 32.8           | -30.8        | 12           | -52.12                  | -13             | -39.12      | V        |
| 13.595                 | -70.22              | Pk  | 39             | -20.3        | 10.5         | -41.02                  | -13             | -28.02      | H        |
| 13.628                 | -70.69              | Pk  | 38.7           | -20.9        | 10.8         | -42.09                  | -13             | -29.09      | V        |
| High Channel, 1905MHz  |                     |     |                |              |              |                         |                 |             |          |
| 2.371                  | -66.52              | Pk  | 31.9           | -31.2        | 13.1         | -52.72                  | -13             | -39.72      | H        |
| 3.883                  | -65.62              | Pk  | 33.6           | -29.4        | 11.2         | -50.22                  | -13             | -37.22      | H        |
| 3.357                  | -67.54              | Pk  | 32.9           | -30.1        | 11.6         | -53.14                  | -13             | -40.14      | V        |
| 6.39                   | -68.92              | Pk  | 35.6           | -26          | 10.6         | -48.72                  | -13             | -35.72      | V        |
| 12.776                 | -72.32              | Pk  | 39.3           | -21          | 10.7         | -43.32                  | -13             | -30.32      | H        |
| 13.683                 | -76.17              | Pk  | 38.8           | -20.8        | 10.7         | -47.47                  | -13             | -34.47      | V        |

Pk - Peak detector

|                |                    |
|----------------|--------------------|
| Company:       |                    |
| Project #:     | 12607353           |
| Date:          | 4/9/2019           |
| Test Engineer: | 31300              |
| Configuration: | EUT Only           |
| Mode:          | LTE 25 16QAM 20MHz |
| Chamber #:     | Chamber B          |

| Frequency (GHz)        | Meter Reading (dBm) | Det | AF T344 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|------------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 1860MHz   |                     |     |                |              |              |                         |                 |             |          |
| 2.756                  | -65.98              | Pk  | 32.4           | -31          | 12.7         | -51.88                  | -13             | -38.88      | H        |
| 4.856                  | -66.6               | Pk  | 34.1           | -28.6        | 11.4         | -49.7                   | -13             | -36.7       | H        |
| 4.852                  | -66.33              | Pk  | 34.1           | -28.6        | 11.3         | -49.53                  | -13             | -36.53      | V        |
| 10.849                 | -70.64              | Pk  | 37.9           | -20.2        | 11           | -41.94                  | -13             | -28.94      | V        |
| 2.401                  | -66.66              | Pk  | 32             | -31.4        | 12.5         | -53.56                  | -13             | -40.56      | V        |
| 6.494                  | -68.73              | Pk  | 35.5           | -26.1        | 10.8         | -48.53                  | -13             | -35.53      | H        |
| Mid Channel, 1882.5MHz |                     |     |                |              |              |                         |                 |             |          |
| 3.872                  | -64.37              | Pk  | 33.6           | -29.5        | 12           | -48.27                  | -13             | -35.27      | H        |
| 4.85                   | -66.67              | Pk  | 34.1           | -28.6        | 11.2         | -49.97                  | -13             | -36.97      | H        |
| 3.881                  | -65.09              | Pk  | 33.6           | -29.4        | 11.6         | -49.29                  | -13             | -36.29      | V        |
| 9.174                  | -70.21              | Pk  | 36.4           | -22.8        | 11.1         | -45.51                  | -13             | -32.51      | V        |
| 2.395                  | -66.18              | Pk  | 32             | -31.4        | 13.2         | -52.38                  | -13             | -39.38      | V        |
| 5.804                  | -68.06              | Pk  | 35             | -27.3        | 10.3         | -50.06                  | -13             | -37.06      | H        |
| High Channel, 1905MHz  |                     |     |                |              |              |                         |                 |             |          |
| 2.688                  | -65.96              | Pk  | 32.4           | -31.1        | 12           | -52.66                  | -13             | -39.66      | H        |
| 3.874                  | -65.68              | Pk  | 33.6           | -29.5        | 12           | -49.58                  | -13             | -36.58      | H        |
| 4.538                  | -65.99              | Pk  | 34.1           | -29          | 11.2         | -49.69                  | -13             | -36.69      | H        |
| 4.362                  | -66.58              | Pk  | 33.9           | -28.6        | 11.4         | -49.88                  | -13             | -36.88      | V        |
| 4.856                  | -66.19              | Pk  | 34.1           | -28.6        | 11.4         | -49.29                  | -13             | -36.29      | V        |
| 9.513                  | -70.41              | Pk  | 36.7           | -23          | 11.1         | -45.61                  | -13             | -32.61      | V        |

Pk - Peak detector

### 9.1.8. LTE BAND 26 (PART 90S)

|                |                        |
|----------------|------------------------|
| Project #:     | 12607353               |
| Date:          | 5/22/2019              |
| Test Engineer: | 39006                  |
| Configuration: | EUT Only               |
| Mode:          | LTE 26(90s) QPSK 10MHz |
| Chamber #:     | Chamber A              |

| Frequency (GHz)     | Meter Reading (dBm) | Det | AF T346 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|---------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Mid Channel, 819MHz |                     |     |                |              |              |                         |                 |             |          |
| 1.641               | -66.58              | Pk  | 28.6           | -32.3        | 12.2         | -58.08                  | -13             | -45.08      | H        |
| 1.643               | -65.53              | Pk  | 28.6           | -32.4        | 11.5         | -57.83                  | -13             | -44.83      | V        |
| 2.39                | -67.21              | Pk  | 32.2           | -31.5        | 12.4         | -54.11                  | -13             | -41.11      | H        |
| 2.396               | -67.01              | Pk  | 32.2           | -31.4        | 13.2         | -53.01                  | -13             | -40.01      | V        |
| 3.273               | -66.8               | Pk  | 32.9           | -30.4        | 10.3         | -54                     | -13             | -41         | H        |
| 3.281               | -66.85              | Pk  | 32.9           | -30.3        | 10.7         | -53.55                  | -13             | -40.55      | V        |

|                |                         |
|----------------|-------------------------|
| Project #:     | 12607353                |
| Date:          | 5/22/2019               |
| Test Engineer: | 39006                   |
| Configuration: | EUT Only                |
| Mode:          | LTE 26(90s) 16QAM 10MHz |
| Chamber #:     | Chamber A               |

| Frequency (GHz)     | Meter Reading (dBm) | Det | AF T346 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|---------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Mid Channel, 819MHz |                     |     |                |              |              |                         |                 |             |          |
| 1.652               | -65.47              | Pk  | 28.7           | -32.4        | 12.1         | -57.07                  | -13             | -44.07      | H        |
| 1.657               | -65.51              | Pk  | 28.7           | -32.5        | 11.7         | -57.61                  | -13             | -44.61      | V        |
| 2.456               | -67.46              | Pk  | 32.5           | -31.5        | 11.5         | -54.96                  | -13             | -41.96      | V        |
| 2.474               | -67.76              | Pk  | 32.7           | -31.5        | 11.8         | -54.76                  | -13             | -41.76      | H        |
| 3.2                 | -67.12              | Pk  | 33.5           | -30.6        | 11.4         | -52.82                  | -13             | -39.82      | H        |
| 3.218               | -67.42              | Pk  | 33             | -30.6        | 11.5         | -53.52                  | -13             | -40.52      | V        |

Pk - Peak detector

### 9.1.9. LTE BAND 30

|                |                   |
|----------------|-------------------|
| Project #:     | 12607353          |
| Date:          | 4/10/2019         |
| Test Engineer: | 12501             |
| Configuration: | EUT Only          |
| Mode:          | LTE 30 QPSK 10MHz |
| Chamber #:     | Chamber A         |

| Frequency (GHz)      | Meter Reading (dBm) | Det | AF T346 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Mid Channel, 2310MHz |                     |     |                |              |              |                         |                 |             |          |
| 4.587                | -66.73              | Pk  | 34.2           | -29.1        | 10.5         | -51.13                  | -40             | -11.13      | H        |
| 4.587                | -66.63              | Pk  | 34.2           | -29.1        | 10.1         | -51.43                  | -40             | -11.43      | V        |
| 9.143                | -71.44              | Pk  | 36.4           | -23          | 11.1         | -46.94                  | -40             | -6.94       | V        |
| 6.832                | -70.03              | Pk  | 35.5           | -25.1        | 10.6         | -49.03                  | -40             | -9.03       | V        |
| 6.883                | -71.97              | Pk  | 35.6           | -24.9        | 10.5         | -50.77                  | -40             | -10.77      | H        |
| 9.298                | -70.61              | Pk  | 36.4           | -23.2        | 10.9         | -46.51                  | -40             | -6.51       | H        |

|                |                    |
|----------------|--------------------|
| Project #:     | 12607353           |
| Date:          | 4/10/2019          |
| Test Engineer: | 12501              |
| Configuration: | EUT Only           |
| Mode:          | LTE 30 16QAM 10MHz |
| Chamber #:     | Chamber A          |

| Frequency (GHz)      | Meter Reading (dBm) | Det | AF T346 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Mid Channel, 2310MHz |                     |     |                |              |              |                         |                 |             |          |
| 4.6                  | -66.22              | Pk  | 34.2           | -29.1        | 10.8         | -50.32                  | -40             | -10.32      | H        |
| 9.142                | -71.81              | Pk  | 36.4           | -23          | 11           | -47.41                  | -40             | -7.41       | H        |
| 4.587                | -66.1               | Pk  | 34.2           | -29.1        | 10.1         | -50.9                   | -40             | -10.9       | V        |
| 9.144                | -70.98              | Pk  | 36.4           | -23          | 11.1         | -46.48                  | -40             | -6.48       | V        |
| 6.831                | -70.17              | Pk  | 35.5           | -25.1        | 10.5         | -49.27                  | -40             | -9.27       | H        |
| 6.832                | -70.29              | Pk  | 35.5           | -25.1        | 10.5         | -49.39                  | -40             | -9.39       | V        |

Pk - Peak detector

### 9.1.10. LTE BAND 41

|                |                   |
|----------------|-------------------|
| Company:       |                   |
| Project #:     | 12607353          |
| Date:          | 4/10/2019         |
| Test Engineer: | 12501             |
| Configuration: | EUT Only          |
| Mode:          | LTE 41 QPSK 20MHz |
| Chamber #:     | Chamber B         |

| Frequency (GHz)       | Meter Reading (dBm) | Det | AF T344 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|-----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 2506MHz  |                     |     |                |              |              |                         |                 |             |          |
| 4.979                 | -67.93              | Pk  | 34.1           | -28.4        | 11.1         | -51.13                  | -25             | -26.13      | H        |
| 7.58                  | -71.68              | Pk  | 35.7           | -24.3        | 10.6         | -49.68                  | -25             | -24.68      | H        |
| 4.979                 | -68.23              | Pk  | 34.1           | -28.4        | 10.9         | -51.63                  | -25             | -26.63      | V        |
| 7.613                 | -71.98              | Pk  | 35.7           | -24.4        | 11.2         | -49.48                  | -25             | -24.48      | V        |
| 10.094                | -72.9               | Pk  | 37.3           | -22          | 10.4         | -47.2                   | -25             | -22.20      | H        |
| 10.179                | -71.58              | Pk  | 37.3           | -21.4        | 10.7         | -44.98                  | -25             | -19.98      | V        |
| Mid Channel, 2593MHz  |                     |     |                |              |              |                         |                 |             |          |
| 5.115                 | -67.51              | Pk  | 34.2           | -28.5        | 11.1         | -50.71                  | -25             | -25.71      | H        |
| 5.169                 | -68.59              | Pk  | 34.2           | -28.5        | 11.6         | -51.29                  | -25             | -26.29      | V        |
| 7.818                 | -71.02              | Pk  | 35.8           | -24.4        | 11.3         | -48.32                  | -25             | -23.32      | V        |
| 7.851                 | -70.73              | Pk  | 35.8           | -24.5        | 11.1         | -48.33                  | -25             | -23.33      | H        |
| 10.3                  | -71.39              | Pk  | 37.4           | -21.3        | 10.2         | -45.09                  | -25             | -20.09      | H        |
| 10.316                | -72.16              | Pk  | 37.5           | -21.3        | 10           | -45.96                  | -25             | -20.96      | V        |
| High Channel, 2680MHz |                     |     |                |              |              |                         |                 |             |          |
| 3.82                  | -64.91              | Pk  | 33.5           | -29.5        | 11.6         | -49.31                  | -25             | -24.31      | H        |
| 7.257                 | -71.83              | Pk  | 35.6           | -25          | 10.6         | -50.63                  | -25             | -25.63      | H        |
| 11.024                | -70.94              | Pk  | 37.9           | -20.8        | 10.5         | -43.34                  | -25             | -18.34      | H        |
| 3.932                 | -64.19              | Pk  | 33.6           | -29.5        | 11.5         | -48.59                  | -25             | -23.59      | V        |
| 3.016                 | -65.91              | Pk  | 33             | -30.8        | 11.8         | -51.91                  | -25             | -26.91      | V        |
| 10.274                | -71.29              | Pk  | 37.5           | -21.5        | 10.1         | -45.19                  | -25             | -20.19      | V        |

Pk - Peak detector

|                |                    |
|----------------|--------------------|
| Company:       |                    |
| Project #:     | 12607353           |
| Date:          | 4/10/2019          |
| Test Engineer: | 12501              |
| Configuration: | EUT Only           |
| Mode:          | LTE 41 16QAM 20MHz |
| Chamber #:     | Chamber B          |

| Frequency (GHz)       | Meter Reading (dBm) | Det | AF T344 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|-----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 2506MHz  |                     |     |                |              |              |                         |                 |             |          |
| 4.997                 | -66.8               | Pk  | 34.1           | -28.4        | 10.7         | -50.4                   | -25             | -25.40      | H        |
| 7.544                 | -70.95              | Pk  | 35.7           | -24.4        | 10.7         | -48.95                  | -25             | -23.95      | H        |
| 4.996                 | -66.98              | Pk  | 34.1           | -28.4        | 10.8         | -50.48                  | -25             | -25.48      | V        |
| 7.562                 | -71.77              | Pk  | 35.7           | -24.4        | 11.3         | -49.17                  | -25             | -24.17      | V        |
| 9.957                 | -73.38              | Pk  | 37.1           | -22.4        | 10.5         | -48.18                  | -25             | -23.18      | V        |
| 10.11                 | -72.79              | Pk  | 37.3           | -21.8        | 10.6         | -46.69                  | -25             | -21.69      | H        |
| Mid Channel, 2593MHz  |                     |     |                |              |              |                         |                 |             |          |
| 7.698                 | -69.92              | Pk  | 35.8           | -24.6        | 11.1         | -47.62                  | -25             | -22.62      | H        |
| 7.682                 | -69.65              | Pk  | 35.7           | -24.5        | 11.4         | -47.05                  | -25             | -22.05      | V        |
| 5.271                 | -68.7               | Pk  | 34.4           | -27.9        | 11.1         | -51.1                   | -25             | -26.10      | H        |
| 5.284                 | -67.9               | Pk  | 34.4           | -27.9        | 11           | -50.4                   | -25             | -25.40      | V        |
| 10.298                | -72.22              | Pk  | 37.4           | -21.4        | 10.2         | -46.02                  | -25             | -21.02      | H        |
| 10.299                | -71.84              | Pk  | 37.4           | -21.4        | 10.3         | -45.54                  | -25             | -20.54      | V        |
| High Channel, 2680MHz |                     |     |                |              |              |                         |                 |             |          |
| 3.826                 | -64.72              | Pk  | 33.5           | -29.1        | 11.4         | -48.92                  | -25             | -23.92      | H        |
| 7.254                 | -70.39              | Pk  | 35.6           | -24.9        | 10.7         | -48.99                  | -25             | -23.99      | H        |
| 3.93                  | -64.81              | Pk  | 33.6           | -29.5        | 11.5         | -49.21                  | -25             | -24.21      | V        |
| 10.856                | -72.04              | Pk  | 37.9           | -20.4        | 11.3         | -43.24                  | -25             | -18.24      | V        |
| 5.834                 | -68.16              | Pk  | 35             | -27.2        | 11           | -49.36                  | -25             | -24.36      | V        |
| 5.994                 | -67.65              | Pk  | 35.4           | -27.1        | 11.1         | -48.25                  | -25             | -23.25      | H        |

Pk - Peak detector

### 9.1.11. LTE BAND 48

|                |                   |
|----------------|-------------------|
| Company:       |                   |
| Project #:     | 12607353          |
| Date:          | 5/20/2019         |
| Test Engineer: | 12491             |
| Configuration: | EUT Only          |
| Mode:          | LTE 48 QPSK 20MHz |
| Chamber #:     | Chamber A         |

| Frequency (GHz)       | Meter Reading (dBm) | Det | AF T346 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|-----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 3560MHz  |                     |     |                |              |              |                         |                 |             |          |
| 10.682                | -76.19              | Pk  | 37.9           | -21.2        | 10.7         | -48.79                  | -40             | -8.79       | H        |
| 10.682                | -76.12              | Pk  | 37.9           | -21.2        | 11           | -48.42                  | -40             | -8.42       | V        |
| 7.109                 | -72.58              | Pk  | 35.4           | -25.3        | 10.3         | -52.18                  | -40             | -12.18      | V        |
| 7.123                 | -74.26              | Pk  | 35.6           | -25.2        | 10.7         | -53.16                  | -40             | -13.16      | H        |
| 14.235                | -74.65              | Pk  | 39.1           | -20.7        | 10.9         | -45.35                  | -40             | -5.35       | V        |
| 14.236                | -74.02              | Pk  | 39.1           | -20.7        | 11.1         | -44.52                  | -40             | -4.52       | H        |
| Mid Channel, 3625MHz  |                     |     |                |              |              |                         |                 |             |          |
| 10.862                | -74.71              | Pk  | 38             | -20.6        | 10.9         | -46.41                  | -40             | -6.41       | H        |
| 10.801                | -73.09              | Pk  | 37.9           | -20.8        | 11           | -44.99                  | -40             | -4.99       | V        |
| 7.24                  | -73.33              | Pk  | 35.5           | -25.1        | 11           | -51.93                  | -40             | -11.93      | V        |
| 7.241                 | -73.59              | Pk  | 35.5           | -25          | 10.6         | -52.49                  | -40             | -12.49      | H        |
| 14.456                | -74.56              | Pk  | 39.7           | -21.1        | 10.5         | -45.46                  | -40             | -5.46       | V        |
| 14.466                | -73.16              | Pk  | 39.7           | -21.1        | 11           | -43.56                  | -40             | -3.56       | H        |
| High Channel, 3690MHz |                     |     |                |              |              |                         |                 |             |          |
| 7.372                 | -74.42              | Pk  | 35.6           | -24.6        | 11.1         | -52.32                  | -40             | -12.32      | H        |
| 11.067                | -76.26              | Pk  | 37.9           | -20.9        | 10.5         | -48.76                  | -40             | -8.76       | H        |
| 7.376                 | -75.12              | Pk  | 35.6           | -24.5        | 11.4         | -52.62                  | -40             | -12.62      | V        |
| 11.063                | -76.1               | Pk  | 37.9           | -21          | 10.7         | -48.5                   | -40             | -8.5        | V        |
| 14.788                | -76.24              | Pk  | 39.9           | -20.3        | 10.9         | -45.74                  | -40             | -5.74       | V        |
| 14.803                | -74.53              | Pk  | 39.9           | -20.2        | 10.6         | -44.23                  | -40             | -4.23       | H        |

Pk - Peak detector

|                |                    |
|----------------|--------------------|
| Company:       |                    |
| Project #:     | 12607353           |
| Date:          | 5/20/2019          |
| Test Engineer: | 12491              |
| Configuration: | EUT Only           |
| Mode:          | LTE 48 16QAM 20MHz |
| Chamber #:     | Chamber A          |

| Frequency (GHz)       | Meter Reading (dBm) | Det | AF T346 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|-----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 3560MHz  |                     |     |                |              |              |                         |                 |             |          |
| 10.673                | -76.77              | Pk  | 37.9           | -21.1        | 10.7         | -49.27                  | -40             | -9.27       | H        |
| 10.682                | -74.79              | Pk  | 37.9           | -21.2        | 11           | -47.09                  | -40             | -7.09       | V        |
| 7.113                 | -73.13              | Pk  | 35.5           | -25.3        | 10.1         | -52.83                  | -40             | -12.83      | H        |
| 7.115                 | -73.8               | Pk  | 35.5           | -25.3        | 10.5         | -53.1                   | -40             | -13.1       | V        |
| 14.235                | -74.93              | Pk  | 39.1           | -20.7        | 11.1         | -45.43                  | -40             | -5.43       | H        |
| 14.239                | -74.02              | Pk  | 39.1           | -20.7        | 10.8         | -44.82                  | -40             | -4.82       | V        |
| Mid Channel, 3625MHz  |                     |     |                |              |              |                         |                 |             |          |
| 7.251                 | -72.84              | Pk  | 35.5           | -24.9        | 10.7         | -51.54                  | -40             | -11.54      | H        |
| 10.878                | -76.08              | Pk  | 37.9           | -20.9        | 10.6         | -48.48                  | -40             | -8.48       | H        |
| 10.874                | -74.03              | Pk  | 37.9           | -20.9        | 11           | -46.03                  | -40             | -6.03       | V        |
| 7.241                 | -73.25              | Pk  | 35.5           | -25          | 11.1         | -51.65                  | -40             | -11.65      | V        |
| 14.502                | -76.15              | Pk  | 39.8           | -20.9        | 10.4         | -46.85                  | -40             | -6.85       | H        |
| 14.504                | -75.2               | Pk  | 39.8           | -21          | 10.4         | -46                     | -40             | -6          | V        |
| High Channel, 3690MHz |                     |     |                |              |              |                         |                 |             |          |
| 7.366                 | -75.35              | Pk  | 35.6           | -24.6        | 10.8         | -53.55                  | -40             | -13.55      | H        |
| 11.068                | -75.73              | Pk  | 37.9           | -20.9        | 10.5         | -48.23                  | -40             | -8.23       | H        |
| 7.361                 | -73.82              | Pk  | 35.6           | -24.6        | 11.3         | -51.52                  | -40             | -11.52      | V        |
| 11.069                | -75.69              | Pk  | 37.9           | -20.9        | 10.7         | -47.99                  | -40             | -7.99       | V        |
| 14.753                | -74.22              | Pk  | 39.9           | -20.5        | 10.1         | -44.72                  | -40             | -4.72       | V        |
| 14.756                | -74.95              | Pk  | 39.9           | -20.4        | 10.2         | -45.25                  | -40             | -5.25       | H        |

Pk - Peak detector

### 9.1.12. LTE BAND 66

|                |                   |
|----------------|-------------------|
| Company:       |                   |
| Project #:     | 12607353          |
| Date:          | 4/11/2019         |
| Test Engineer: | 31300             |
| Configuration: | EUT Only          |
| Mode:          | LTE 66 QPSK 20MHz |
| Chamber #:     | Chamber B         |

| Frequency (GHz)       | Meter Reading (dBm) | Det | AF T344 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|-----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 1720MHz  |                     |     |                |              |              |                         |                 |             |          |
| 2.748                 | -66.88              | Pk  | 32.3           | -31.3        | 12.6         | -53.28                  | -13             | -40.28      | H        |
| 4.057                 | -66.43              | Pk  | 33.7           | -29.3        | 11.4         | -50.63                  | -13             | -37.63      | V        |
| 5.134                 | -67.27              | Pk  | 34.2           | -28.6        | 10.9         | -50.77                  | -13             | -37.77      | V        |
| 2.12                  | -61.72              | Pk  | 31.3           | -31.8        | 13.1         | -49.12                  | -13             | -36.12      | H        |
| 2.12                  | -57.51              | Pk  | 31.3           | -31.8        | 12.5         | -45.51                  | -13             | -32.51      | V        |
| 12.873                | -72.22              | Pk  | 39.4           | -21.1        | 10.6         | -43.32                  | -13             | -30.32      | H        |
| Mid Channel, 1745MHz  |                     |     |                |              |              |                         |                 |             |          |
| 3.859                 | -64.94              | Pk  | 33.6           | -29.6        | 12           | -48.94                  | -13             | -35.94      | H        |
| 4.326                 | -66.87              | Pk  | 33.9           | -28.7        | 10.9         | -50.77                  | -13             | -37.77      | V        |
| 10.844                | -72.4               | Pk  | 38             | -20.2        | 10.8         | -43.8                   | -13             | -30.8       | V        |
| 2.145                 | -58.95              | Pk  | 31.3           | -31.7        | 12.6         | -46.75                  | -13             | -33.75      | V        |
| 2.198                 | -69.48              | Pk  | 31.4           | -31.4        | 12.3         | -57.18                  | -13             | -44.18      | H        |
| 5.222                 | -67.43              | Pk  | 34.3           | -28.2        | 11.1         | -50.23                  | -13             | -37.23      | H        |
| High Channel, 1770MHz |                     |     |                |              |              |                         |                 |             |          |
| 3.858                 | -65.7               | Pk  | 33.6           | -29.7        | 12           | -49.8                   | -13             | -36.8       | H        |
| 3.869                 | -65.93              | Pk  | 33.6           | -29.4        | 11.5         | -50.23                  | -13             | -37.23      | V        |
| 7.687                 | -69.98              | Pk  | 35.8           | -24.4        | 11.3         | -47.28                  | -13             | -34.28      | V        |
| 2.129                 | -65.76              | Pk  | 31.3           | -31.6        | 12.6         | -53.46                  | -13             | -40.46      | H        |
| 2.14                  | -66.24              | Pk  | 31.3           | -31.7        | 12.8         | -53.84                  | -13             | -40.84      | V        |
| 7.09                  | -69.74              | Pk  | 35.6           | -25.2        | 10.4         | -48.94                  | -13             | -35.94      | H        |

Pk - Peak detector

|                |                    |
|----------------|--------------------|
| Company:       |                    |
| Project #:     | 12607353           |
| Date:          | 4/11/2019          |
| Test Engineer: | 31300              |
| Configuration: | EUT Only           |
| Mode:          | LTE 66 16QAM 20MHz |
| Chamber #:     | Chamber B          |

| Frequency (GHz)       | Meter Reading (dBm) | Det | AF T344 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|-----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 1720MHz  |                     |     |                |              |              |                         |                 |             |          |
| 11.77                 | -71.95              | Pk  | 38.4           | -20.7        | 10.8         | -43.45                  | -13             | -30.45      | H        |
| 2.876                 | -65.87              | Pk  | 32.3           | -30.6        | 12.6         | -51.57                  | -13             | -38.57      | V        |
| 3.831                 | -63.82              | Pk  | 33.5           | -29.4        | 11.2         | -48.52                  | -13             | -35.52      | V        |
| 3.443                 | -65.87              | Pk  | 32.8           | -30.2        | 11.6         | -51.67                  | -13             | -38.67      | H        |
| 5.551                 | -67.16              | Pk  | 34.8           | -28.1        | 10.8         | -49.66                  | -13             | -36.66      | H        |
| 6.561                 | -68.55              | Pk  | 35.5           | -26          | 11.2         | -47.85                  | -13             | -34.85      | V        |
| Mid Channel, 1745MHz  |                     |     |                |              |              |                         |                 |             |          |
| 3.932                 | -64.14              | Pk  | 33.6           | -29.5        | 11.4         | -48.64                  | -13             | -35.64      | H        |
| 4.339                 | -66.08              | Pk  | 34             | -28.9        | 11.1         | -49.88                  | -13             | -36.88      | H        |
| 11.446                | -71.75              | Pk  | 38.1           | -20.8        | 10.9         | -43.55                  | -13             | -30.55      | H        |
| 3.931                 | -65.16              | Pk  | 33.6           | -29.5        | 11.5         | -49.56                  | -13             | -36.56      | V        |
| 4.572                 | -66.35              | Pk  | 34.2           | -28.8        | 10.4         | -50.55                  | -13             | -37.55      | V        |
| 13.6                  | -70.89              | Pk  | 38.7           | -20.4        | 10.3         | -42.29                  | -13             | -29.29      | V        |
| High Channel, 1770MHz |                     |     |                |              |              |                         |                 |             |          |
| 3.826                 | -64.72              | Pk  | 33.5           | -29.1        | 11.4         | -48.92                  | -13             | -35.92      | H        |
| 7.254                 | -70.39              | Pk  | 35.6           | -24.9        | 10.7         | -48.99                  | -13             | -35.99      | H        |
| 3.93                  | -64.81              | Pk  | 33.6           | -29.5        | 11.5         | -49.21                  | -13             | -36.21      | V        |
| 10.856                | -72.04              | Pk  | 37.9           | -20.4        | 11.3         | -43.24                  | -13             | -30.24      | V        |
| 5.834                 | -68.16              | Pk  | 35             | -27.2        | 11           | -49.36                  | -13             | -36.36      | V        |
| 5.994                 | -67.65              | Pk  | 35.4           | -27.1        | 11.1         | -48.25                  | -13             | -35.25      | H        |

Pk - Peak detector

## 9.2. FIELD STRENGTH OF SPURIOUS RADIATION, ANT 2

### 9.2.1. LTE BAND 2

|                |                  |
|----------------|------------------|
| Company:       |                  |
| Project #:     | 12607353         |
| Date:          | 5/17/2019        |
| Test Engineer: | 39006            |
| Configuration: | EUT Only         |
| Mode:          | LTE 2 QPSK 20MHz |
| Chamber #:     | Chamber A        |

| Frequency (GHz)      | Meter Reading (dBm) | Det | AF T344 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 1860MHz |                     |     |                |              |              |                         |                 |             |          |
| 3.773                | -65.47              | Pk  | 33.1           | -29.8        | 11.3         | -50.87                  | -13             | -37.87      | H        |
| 3.816                | -64.35              | Pk  | 33.4           | -29.5        | 11.4         | -49.05                  | -13             | -36.05      | V        |
| 7.315                | -69.78              | Pk  | 35.5           | -24.9        | 11.4         | -47.78                  | -13             | -34.78      | V        |
| 6.013                | -68.05              | Pk  | 35.1           | -27.3        | 11.1         | -49.15                  | -13             | -36.15      | H        |
| 9.647                | -70.34              | Pk  | 36.8           | -22.3        | 10.8         | -45.04                  | -13             | -32.04      | H        |
| 9.745                | -70.47              | Pk  | 36.9           | -22.4        | 11.1         | -44.87                  | -13             | -31.87      | V        |
| Mid Channel, 1880MHz |                     |     |                |              |              |                         |                 |             |          |
| 3.759                | -66.02              | Pk  | 33.1           | -29.7        | 11.5         | -51.12                  | -13             | -38.12      | H        |
| 10.853               | -71.88              | Pk  | 37.9           | -20.2        | 10.7         | -43.48                  | -13             | -30.48      | H        |
| 3.882                | -77.01              | Pk  | 33.3           | -29.4        | 11.5         | -61.61                  | -13             | -48.61      | V        |
| 7.659                | -69.57              | Pk  | 35.6           | -24.6        | 11.2         | -47.37                  | -13             | -34.37      | V        |
| 10.862               | -71.89              | Pk  | 38             | -20.6        | 11.3         | -43.19                  | -13             | -30.19      | V        |
| 7.997                | -69.4               | Pk  | 35.7           | -24.2        | 11.3         | -46.6                   | -13             | -33.6       | H        |
| HighChannel, 1900MHz |                     |     |                |              |              |                         |                 |             |          |
| 3.83                 | -65.29              | Pk  | 33.4           | -29.3        | 11.3         | -49.89                  | -13             | -36.89      | H        |
| 11.472               | -71.33              | Pk  | 38.1           | -20.9        | 10.9         | -43.23                  | -13             | -30.23      | H        |
| 3.812                | -66.14              | Pk  | 33.4           | -29.4        | 11           | -51.14                  | -13             | -38.14      | V        |
| 11.475               | -72.08              | Pk  | 38.2           | -20.9        | 10.9         | -43.88                  | -13             | -30.88      | V        |
| 6.57                 | -68.65              | Pk  | 35.6           | -26.2        | 11.4         | -47.85                  | -13             | -34.85      | V        |
| 6.599                | -69.63              | Pk  | 35.7           | -26.1        | 10.3         | -49.73                  | -13             | -36.73      | H        |

Pk - Peak detector

|                |                   |
|----------------|-------------------|
| Company:       |                   |
| Project #:     | 12607353          |
| Date:          | 5/17/2019         |
| Test Engineer: | 39006             |
| Configuration: | EUT Only          |
| Mode:          | LTE 2 16QAM 20MHz |
| Chamber #:     | Chamber A         |

| Frequency (GHz)       | Meter Reading (dBm) | Det | AF T344 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|-----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 1860MHz  |                     |     |                |              |              |                         |                 |             |          |
| 3.887                 | -65.49              | Pk  | 33.4           | -29.4        | 11.2         | -50.29                  | -13             | -37.29      | H        |
| 11.048                | -70.5               | Pk  | 37.9           | -21          | 10.6         | -43                     | -13             | -30         | H        |
| 3.879                 | -65.11              | Pk  | 33.4           | -29.4        | 11.9         | -49.21                  | -13             | -36.21      | V        |
| 7.318                 | -69.57              | Pk  | 35.5           | -25          | 11.4         | -47.67                  | -13             | -34.67      | V        |
| 10.901                | -71.92              | Pk  | 37.9           | -20.7        | 10.4         | -44.32                  | -13             | -31.32      | V        |
| 7.204                 | -69.77              | Pk  | 35.5           | -25          | 10.4         | -48.87                  | -13             | -35.87      | H        |
| Mid Channel, 1880MHz  |                     |     |                |              |              |                         |                 |             |          |
| 2.751                 | -69.33              | Pk  | 32.7           | -31.2        | 12.6         | -55.23                  | -13             | -42.23      | H        |
| 3.86                  | -65.65              | Pk  | 33.4           | -29.6        | 11.9         | -49.95                  | -13             | -36.95      | H        |
| 11.754                | -72.3               | Pk  | 38.5           | -20.8        | 10.5         | -44.1                   | -13             | -31.1       | H        |
| 2.709                 | -66.02              | Pk  | 32.7           | -31.1        | 11.3         | -53.12                  | -13             | -40.12      | V        |
| 3.859                 | -66.38              | Pk  | 33.5           | -29.6        | 11.4         | -51.08                  | -13             | -38.08      | V        |
| 10.901                | -72.12              | Pk  | 37.9           | -20.7        | 10.4         | -44.52                  | -13             | -31.52      | V        |
| High Channel, 1900MHz |                     |     |                |              |              |                         |                 |             |          |
| 3.786                 | -65.32              | Pk  | 33.2           | -29.7        | 10.8         | -51.02                  | -13             | -38.02      | H        |
| 11.385                | -72.67              | Pk  | 38             | -20.4        | 10.8         | -44.27                  | -13             | -31.27      | H        |
| 3.883                 | -65.39              | Pk  | 33.3           | -29.4        | 11.4         | -50.09                  | -13             | -37.09      | V        |
| 11.027                | -71.53              | Pk  | 37.9           | -20.8        | 10.7         | -43.73                  | -13             | -30.73      | V        |
| 6.348                 | -69.48              | Pk  | 35.3           | -26.2        | 10.5         | -49.88                  | -13             | -36.88      | V        |
| 6.412                 | -68.64              | Pk  | 35.5           | -26.1        | 10.1         | -49.14                  | -13             | -36.14      | H        |

Pk - Peak detector

## 9.2.2. LTE BAND 5

|                |                  |
|----------------|------------------|
| Company:       |                  |
| Project #:     | 12607353         |
| Date:          | 4/11/2019        |
| Test Engineer: | 12501            |
| Configuration: | EUT Only         |
| Mode:          | LTE 5 QPSK 10MHz |
| Chamber #:     | Chamber B        |

| Frequency (GHz)       | Meter Reading (dBm) | Det | AF T344 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|-----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 829MHz   |                     |     |                |              |              |                         |                 |             |          |
| 1.693                 | -67                 | Pk  | 28.7           | -32.3        | 12.5         | -58.1                   | -13             | -45.1       | H        |
| 1.709                 | -66.91              | Pk  | 29.2           | -32.3        | 13.1         | -56.91                  | -13             | -43.91      | V        |
| 3.261                 | -67                 | Pk  | 32.9           | -30.5        | 10.5         | -54.1                   | -13             | -41.1       | V        |
| 2.48                  | -67.63              | Pk  | 32.4           | -31.4        | 11.4         | -55.23                  | -13             | -42.23      | V        |
| 2.481                 | -67.45              | Pk  | 32.4           | -31.4        | 11.3         | -55.15                  | -13             | -42.15      | H        |
| 3.312                 | -67.41              | Pk  | 32.8           | -30.3        | 11.5         | -53.41                  | -13             | -40.41      | H        |
| Mid Channel, 836.5MHz |                     |     |                |              |              |                         |                 |             |          |
| 1.719                 | -66.62              | Pk  | 29.3           | -32.4        | 13.8         | -55.92                  | -13             | -42.92      | V        |
| 1.761                 | -66.57              | Pk  | 29.7           | -32.3        | 12.2         | -56.97                  | -13             | -43.97      | H        |
| 2.545                 | -67.66              | Pk  | 32.2           | -31.5        | 11.9         | -55.06                  | -13             | -42.06      | H        |
| 2.649                 | -66.99              | Pk  | 32.4           | -31          | 11.8         | -53.79                  | -13             | -40.79      | V        |
| 3.328                 | -67.96              | Pk  | 32.9           | -30.2        | 11           | -54.26                  | -13             | -41.26      | V        |
| 3.414                 | -67.86              | Pk  | 32.8           | -30.2        | 11.7         | -53.56                  | -13             | -40.56      | H        |
| High Channel, 844MHz  |                     |     |                |              |              |                         |                 |             |          |
| 1.71                  | -66.45              | Pk  | 29.2           | -32.3        | 13.1         | -56.45                  | -13             | -43.45      | V        |
| 1.73                  | -66.56              | Pk  | 29.5           | -32.4        | 12.4         | -57.06                  | -13             | -44.06      | H        |
| 2.443                 | -67.88              | Pk  | 32.3           | -31.4        | 12.1         | -54.88                  | -13             | -41.88      | V        |
| 2.462                 | -68.04              | Pk  | 32.4           | -31.6        | 12.3         | -54.94                  | -13             | -41.94      | H        |
| 3.43                  | -68.14              | Pk  | 32.7           | -30.1        | 11.9         | -53.64                  | -13             | -40.64      | H        |
| 3.448                 | -69.01              | Pk  | 32.8           | -30.2        | 11.6         | -54.81                  | -13             | -41.81      | V        |

Pk - Peak detector

|                |                   |
|----------------|-------------------|
| Company:       |                   |
| Project #:     | 12607353          |
| Date:          | 4/11/2019         |
| Test Engineer: | 12501             |
| Configuration: | EUT Only          |
| Mode:          | LTE 5 16QAM 10MHz |
| Chamber #:     | Chamber B         |

| Frequency (GHz)       | Meter Reading (dBm) | Det | AF T344 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|-----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 829MHz   |                     |     |                |              |              |                         |                 |             |          |
| 1.693                 | -66.57              | Pk  | 28.7           | -32.3        | 12.6         | -57.57                  | -13             | -44.57      | H        |
| 1.714                 | -66.44              | Pk  | 29.2           | -32.3        | 13.1         | -56.44                  | -13             | -43.44      | V        |
| 2.562                 | -67.22              | Pk  | 32.3           | -31.3        | 12.2         | -54.02                  | -13             | -41.02      | H        |
| 2.633                 | -67.88              | Pk  | 32.4           | -31          | 13           | -53.48                  | -13             | -40.48      | V        |
| 3.364                 | -67.64              | Pk  | 32.8           | -30.2        | 11.1         | -53.94                  | -13             | -40.94      | H        |
| 3.43                  | -68                 | Pk  | 32.7           | -30.1        | 12.1         | -53.3                   | -13             | -40.3       | V        |
| Mid Channel, 836.5MHz |                     |     |                |              |              |                         |                 |             |          |
| 1.684                 | -65.9               | Pk  | 28.7           | -32.4        | 12.3         | -57.3                   | -13             | -44.3       | H        |
| 1.683                 | -65.93              | Pk  | 28.7           | -32.3        | 11           | -58.53                  | -13             | -45.53      | V        |
| 3.346                 | -69.47              | Pk  | 32.9           | -30.2        | 11           | -55.77                  | -13             | -42.77      | V        |
| 2.545                 | -67.81              | Pk  | 32.2           | -31.5        | 11.8         | -55.31                  | -13             | -42.31      | V        |
| 2.563                 | -66.87              | Pk  | 32.3           | -31.3        | 12.2         | -53.67                  | -13             | -40.67      | H        |
| 3.311                 | -65.92              | Pk  | 32.8           | -30.3        | 11.4         | -52.02                  | -13             | -39.02      | H        |
| High Channel, 844MHz  |                     |     |                |              |              |                         |                 |             |          |
| 1.711                 | -65.93              | Pk  | 29.2           | -32.3        | 13.1         | -55.93                  | -13             | -42.93      | V        |
| 1.729                 | -66.03              | Pk  | 29.5           | -32.3        | 12.3         | -56.53                  | -13             | -43.53      | H        |
| 2.531                 | -67.25              | Pk  | 32.3           | -31.4        | 12.1         | -54.25                  | -13             | -41.25      | V        |
| 2.617                 | -67.72              | Pk  | 32.4           | -31.1        | 12.5         | -53.92                  | -13             | -40.92      | H        |
| 3.295                 | -67.29              | Pk  | 32.9           | -30.3        | 11.3         | -53.39                  | -13             | -40.39      | H        |
| 3.33                  | -67.27              | Pk  | 32.9           | -30.2        | 11           | -53.57                  | -13             | -40.57      | V        |

Pk - Peak detector

### 9.2.3. LTE BAND 7

|                |                  |
|----------------|------------------|
| Company:       |                  |
| Project #:     | 12607353         |
| Date:          | 5/17/2019        |
| Test Engineer: | 39006            |
| Configuration: | EUT Only         |
| Mode:          | LTE 7 QPSK 20MHz |
| Chamber #:     | Chamber A        |

| Frequency (GHz)       | Meter Reading (dBm) | Det | AF T346 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|-----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 2510MHz  |                     |     |                |              |              |                         |                 |             |          |
| 5.026                 | -69.37              | Pk  | 34.1           | -28.7        | 8.5          | -55.47                  | -25             | -30.47      | V        |
| 7.53                  | -71.3               | Pk  | 35.7           | -26.3        | 7.3          | -54.6                   | -25             | -29.60      | V        |
| 7.533                 | -70.86              | Pk  | 35.7           | -26.4        | 7.3          | -54.26                  | -25             | -29.26      | V        |
| 10.035                | -72.34              | Pk  | 37             | -22.7        | 8            | -50.04                  | -25             | -25.04      | V        |
| 10.04                 | -84.78              | Pk  | 37.1           | -22.8        | 8            | -62.48                  | -25             | -37.48      | H        |
| 10.079                | -72.91              | Pk  | 37.2           | -22.8        | 7.9          | -50.61                  | -25             | -25.61      | V        |
| Mid Channel, 2535MHz  |                     |     |                |              |              |                         |                 |             |          |
| 7.578                 | -56.97              | Pk  | 35.4           | -24.3        | 10.6         | -35.27                  | -25             | -10.27      | H        |
| 7.578                 | -57.84              | Pk  | 35.4           | -24.3        | 10.9         | -35.84                  | -25             | -10.84      | V        |
| 11.055                | -71.84              | Pk  | 37.9           | -20.9        | 10.9         | -43.94                  | -25             | -18.94      | V        |
| 6.591                 | -69.58              | Pk  | 35.6           | -25.9        | 10.7         | -49.18                  | -25             | -24.18      | V        |
| 10.079                | -72.91              | Pk  | 36.9           | -22          | 10.3         | -47.71                  | -25             | -22.71      | V        |
| 13.75                 | -70.67              | Pk  | 38.6           | -21          | 10.9         | -42.17                  | -25             | -17.17      | H        |
| High Channel, 2560MHz |                     |     |                |              |              |                         |                 |             |          |
| 7.653                 | -67.13              | Pk  | 35.6           | -24.5        | 10.7         | -45.33                  | -25             | -20.33      | H        |
| 7.653                 | -59.58              | Pk  | 35.6           | -24.5        | 11           | -37.48                  | -25             | -12.48      | V        |
| 4.437                 | -67.36              | Pk  | 33.5           | -29          | 11.6         | -51.26                  | -25             | -26.26      | V        |
| 4.447                 | -65.84              | Pk  | 33.5           | -29.2        | 11.4         | -50.14                  | -25             | -25.14      | H        |
| 10.079                | -72.91              | Pk  | 36.9           | -22          | 10.3         | -47.71                  | -25             | -22.71      | V        |
| 13.633                | -71.32              | Pk  | 38.7           | -20.8        | 10.9         | -42.52                  | -25             | -17.52      | H        |
| 13.663                | -70.8               | Pk  | 38.7           | -20.6        | 10.1         | -42.6                   | -25             | -17.6       | V        |

Pk - Peak detector

|                |                   |
|----------------|-------------------|
| Company:       |                   |
| Project #:     | 12607353          |
| Date:          | 5/17/2019         |
| Test Engineer: | 39006             |
| Configuration: | EUT Only          |
| Mode:          | LTE 7 16QAM 20MHz |
| Chamber #:     | Chamber A         |

| Frequency (GHz)       | Meter Reading (dBm) | Det | AF T346 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|-----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 2510MHz  |                     |     |                |              |              |                         |                 |             |          |
| 3.871                 | -65.69              | Pk  | 33.4           | -29.4        | 11.8         | -49.89                  | -25             | -24.89      | H        |
| 10.963                | -71.62              | Pk  | 37.9           | -21.1        | 10.4         | -44.42                  | -25             | -19.42      | H        |
| 3.89                  | -66.24              | Pk  | 33.4           | -29.3        | 11.2         | -50.94                  | -25             | -25.94      | V        |
| 10.922                | -71.48              | Pk  | 37.9           | -20.8        | 11.1         | -43.28                  | -25             | -18.28      | V        |
| 6.513                 | -69.61              | Pk  | 35.6           | -26.1        | 11.3         | -48.81                  | -25             | -23.81      | V        |
| 6.517                 | -69.04              | Pk  | 35.6           | -26          | 10.9         | -48.54                  | -25             | -23.54      | H        |
| Mid Channel, 2535MHz  |                     |     |                |              |              |                         |                 |             |          |
| 7.578                 | -60.47              | Pk  | 35.4           | -24.3        | 10.6         | -38.77                  | -25             | -13.77      | H        |
| 7.579                 | -57.66              | Pk  | 35.4           | -24.3        | 10.9         | -35.66                  | -25             | -10.66      | V        |
| 5.168                 | -66.92              | Pk  | 34.2           | -28.5        | 11.6         | -49.62                  | -25             | -24.62      | V        |
| 10.079                | -72.91              | Pk  | 36.9           | -22          | 10.3         | -47.71                  | -25             | -22.71      | V        |
| 16.557                | -72.06              | Pk  | 41.8           | -20.2        | 11.1         | -39.36                  | -25             | -14.36      | V        |
| 16.623                | -72.27              | Pk  | 42             | -20.1        | 11.3         | -39.07                  | -25             | -14.07      | H        |
| High Channel, 2560MHz |                     |     |                |              |              |                         |                 |             |          |
| 7.69                  | -69.99              | Pk  | 35.5           | -24.5        | 11.1         | -47.89                  | -25             | -22.89      | H        |
| 4.855                 | -67.17              | Pk  | 34.1           | -28.6        | 11.4         | -50.27                  | -25             | -25.27      | V        |
| 7.653                 | -57.36              | Pk  | 35.6           | -24.5        | 11           | -35.26                  | -25             | -10.26      | V        |
| 10.079                | -72.91              | Pk  | 36.9           | -22          | 10.3         | -47.71                  | -25             | -22.71      | V        |
| 13.609                | -70.68              | Pk  | 38.7           | -20.6        | 10.4         | -42.18                  | -25             | -17.18      | V        |
| 13.63                 | -70.7               | Pk  | 38.7           | -20.7        | 11           | -41.7                   | -25             | -16.7       | H        |

Pk - Peak detector

## 9.2.4. LTE BAND 12

|                |                   |
|----------------|-------------------|
| Company:       |                   |
| Project #:     | 12607353          |
| Date:          | 4/11/2019         |
| Test Engineer: | 12501             |
| Configuration: | EUT Only          |
| Mode:          | LTE 12 QPSK 10MHz |
| Chamber #:     | Chamber B         |

| Frequency (GHz)       | Meter Reading (dBm) | Det | AF T344 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|-----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 704MHz   |                     |     |                |              |              |                         |                 |             |          |
| 1.408                 | -67.8               | Pk  | 28.4           | -32.5        | 12.8         | -59.1                   | -13             | -46.10      | H        |
| 2.751                 | -66.88              | Pk  | 32.3           | -31.2        | 12.6         | -53.18                  | -13             | -40.18      | H        |
| 1.395                 | -66.49              | Pk  | 28.6           | -32.5        | 12.6         | -57.79                  | -13             | -44.79      | V        |
| 2.701                 | -66.93              | Pk  | 32.4           | -31          | 11.6         | -53.93                  | -13             | -40.93      | V        |
| 2.137                 | -66.57              | Pk  | 31.3           | -31.8        | 13           | -54.07                  | -13             | -41.07      | V        |
| 2.191                 | -66.13              | Pk  | 31.4           | -31.5        | 11.8         | -54.43                  | -13             | -41.43      | H        |
| Mid Channel, 707.5MHz |                     |     |                |              |              |                         |                 |             |          |
| 1.412                 | -66.99              | Pk  | 28.4           | -32.6        | 11.9         | -59.29                  | -13             | -46.29      | H        |
| 2.205                 | -66.14              | Pk  | 31.5           | -31.5        | 12           | -54.14                  | -13             | -41.14      | H        |
| 2.802                 | -67.1               | Pk  | 32.4           | -31          | 12.3         | -53.4                   | -13             | -40.40      | H        |
| 1.409                 | -66.26              | Pk  | 28.4           | -32.6        | 12.2         | -58.26                  | -13             | -45.26      | V        |
| 2.749                 | -66.82              | Pk  | 32.3           | -31.2        | 11.7         | -54.02                  | -13             | -41.02      | V        |
| 2.137                 | -66.69              | Pk  | 31.3           | -31.8        | 13           | -54.19                  | -13             | -41.19      | V        |
| High Channel, 711MHz  |                     |     |                |              |              |                         |                 |             |          |
| 3.816                 | -65.7               | Pk  | 33.5           | -29.5        | 11.5         | -50.2                   | -13             | -37.20      | H        |
| 12.409                | -72.18              | Pk  | 39             | -20.9        | 10.7         | -43.38                  | -13             | -30.38      | H        |
| 2.13                  | -65.17              | Pk  | 31.4           | -31.6        | 13.4         | -51.97                  | -13             | -38.97      | V        |
| 2.196                 | -68.24              | Pk  | 31.4           | -31.5        | 12.1         | -56.24                  | -13             | -43.24      | H        |
| 3.297                 | -66.44              | Pk  | 32.9           | -30.4        | 11.3         | -52.64                  | -13             | -39.64      | V        |
| 6.453                 | -69.41              | Pk  | 35.5           | -26          | 11           | -48.91                  | -13             | -35.91      | V        |

Pk - Peak detector

|                |                    |
|----------------|--------------------|
| Company:       |                    |
| Project #:     | 12607353           |
| Date:          | 4/11/2019          |
| Test Engineer: | 12501              |
| Configuration: | EUT Only           |
| Mode:          | LTE 12 16QAM 10MHz |
| Chamber #:     | Chamber B          |

| Frequency (GHz)       | Meter Reading (dBm) | Det | AF T344 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|-----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 704MHz   |                     |     |                |              |              |                         |                 |             |          |
| 1.345                 | -67.9               | Pk  | 29             | -32.8        | 12.9         | -58.8                   | -13             | -45.80      | H        |
| 2.8                   | -67.05              | Pk  | 32.4           | -31          | 12.2         | -53.45                  | -13             | -40.45      | H        |
| 1.407                 | -66.46              | Pk  | 28.4           | -32.5        | 12.3         | -58.26                  | -13             | -45.26      | V        |
| 2.87                  | -67.03              | Pk  | 32.3           | -30.6        | 12.3         | -53.03                  | -13             | -40.03      | V        |
| 2.19                  | -66.7               | Pk  | 31.4           | -31.5        | 12.5         | -54.3                   | -13             | -41.30      | V        |
| 2.192                 | -66.88              | Pk  | 31.4           | -31.5        | 11.8         | -55.18                  | -13             | -42.18      | H        |
| Mid Channel, 707.5MHz |                     |     |                |              |              |                         |                 |             |          |
| 1.343                 | -66.71              | Pk  | 29             | -32.8        | 12.9         | -57.61                  | -13             | -44.61      | H        |
| 2.751                 | -66.79              | Pk  | 32.3           | -31.2        | 12.6         | -53.09                  | -13             | -40.09      | H        |
| 1.394                 | -65.59              | Pk  | 28.6           | -32.5        | 12.5         | -56.99                  | -13             | -43.99      | V        |
| 2.82                  | -66.34              | Pk  | 32.4           | -30.8        | 12.3         | -52.44                  | -13             | -39.44      | V        |
| 2.123                 | -66.71              | Pk  | 31.3           | -31.7        | 13.1         | -54.01                  | -13             | -41.01      | H        |
| 2.137                 | -66.36              | Pk  | 31.3           | -31.8        | 13           | -53.86                  | -13             | -40.86      | V        |
| High Channel, 711MHz  |                     |     |                |              |              |                         |                 |             |          |
| 3.821                 | -65.32              | Pk  | 33.5           | -29.5        | 11.5         | -49.82                  | -13             | -36.82      | H        |
| 7.736                 | -69.74              | Pk  | 35.8           | -24.5        | 11.3         | -47.14                  | -13             | -34.14      | H        |
| 3.889                 | -65.63              | Pk  | 33.6           | -29.3        | 11.2         | -50.13                  | -13             | -37.13      | V        |
| 2.118                 | -65.83              | Pk  | 31.3           | -31.8        | 12.9         | -53.43                  | -13             | -40.43      | H        |
| 2.12                  | -65.53              | Pk  | 31.3           | -31.8        | 12.5         | -53.53                  | -13             | -40.53      | V        |
| 6.37                  | -69.71              | Pk  | 35.6           | -26.3        | 10.9         | -49.51                  | -13             | -36.51      | V        |

Pk - Peak detector

### 9.2.5. LTE BAND 13

|                |                   |
|----------------|-------------------|
| Project #:     | 12607353          |
| Date:          | 4/11/2019         |
| Test Engineer: | 31300             |
| Configuration: | EUT Only          |
| Mode:          | LTE 13 QPSK 10MHz |
| Chamber #:     | Chamber B         |

| Frequency (GHz)     | Meter Reading (dBm) | Det | AF T344 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|---------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Mid Channel, 782MHz |                     |     |                |              |              |                         |                 |             |          |
| 3.843               | -65.11              | Pk  | 33.6           | -29.6        | 11.1         | -50.01                  | -13             | -37.01      | H        |
| 4.851               | -66.83              | Pk  | 34.1           | -28.6        | 11.3         | -50.03                  | -13             | -37.03      | H        |
| 1.574               | -69.9               | Pk  | 28.1           | -32.4        | 12.2         | -62                     | -40             | -22         | V        |
| 1.599               | -69.49              | Pk  | 28.1           | -32.4        | 11.9         | -61.89                  | -40             | -21.89      | H        |
| 2.635               | -64.9               | Pk  | 32.4           | -31          | 13           | -50.5                   | -13             | -37.50      | V        |
| 7.07                | -69.35              | Pk  | 35.6           | -24.8        | 10.9         | -47.65                  | -13             | -34.65      | V        |

|                |                    |
|----------------|--------------------|
| Project #:     | 12607353           |
| Date:          | 4/11/2019          |
| Test Engineer: | 31300              |
| Configuration: | EUT Only           |
| Mode:          | LTE 13 16QAM 10MHz |
| Chamber #:     | Chamber B          |

| Frequency (GHz)     | Meter Reading (dBm) | Det | AF T344 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|---------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Mid Channel, 782MHz |                     |     |                |              |              |                         |                 |             |          |
| 3.832               | -64.87              | Pk  | 33.5           | -29.4        | 11.2         | -49.57                  | -13             | -36.57      | H        |
| 4.852               | -67.14              | Pk  | 34.1           | -28.6        | 11.3         | -50.34                  | -13             | -37.34      | H        |
| 1.578               | -69.75              | Pk  | 28.1           | -32.3        | 12.3         | -61.65                  | -40             | -21.65      | V        |
| 3.835               | -66.11              | Pk  | 33.6           | -29.5        | 11           | -51.01                  | -13             | -38.01      | V        |
| 1.559               | -68.71              | Pk  | 28.1           | -32.5        | 11.2         | -61.91                  | -40             | -21.91      | H        |
| 7.073               | -70.18              | Pk  | 35.6           | -24.8        | 11           | -48.38                  | -13             | -35.38      | V        |

Pk - Peak detector

### 9.2.6. LTE BAND 17

|                |                   |
|----------------|-------------------|
| Project #:     | 12607353          |
| Date:          | 5/23/2019         |
| Test Engineer: | 39006             |
| Configuration: | EUT Only          |
| Mode:          | LTE 17 QPSK 10MHz |
| Chamber #:     | Chamber A         |

| Frequency (GHz)     | Meter Reading (dBm) | Det | AF T346 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|---------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Mid Channel, 710MHz |                     |     |                |              |              |                         |                 |             |          |
| 1.457               | -69.97              | Pk  | 28.3           | -32.5        | 11.4         | -62.77                  | -13             | -49.77      | H        |
| 1.471               | -69.15              | Pk  | 28.3           | -32.5        | 11.9         | -61.45                  | -13             | -48.45      | V        |
| 2.126               | -70.9               | Pk  | 31.3           | -31.6        | 12.7         | -58.5                   | -13             | -45.50      | H        |
| 2.129               | -69.28              | Pk  | 31.3           | -31.6        | 13.4         | -56.18                  | -13             | -43.18      | V        |
| 2.833               | -70.01              | Pk  | 32.1           | -30.7        | 11.9         | -56.71                  | -13             | -43.71      | H        |
| 2.836               | -71.86              | Pk  | 32.1           | -30.7        | 11.7         | -58.76                  | -13             | -45.76      | V        |

|                |                    |
|----------------|--------------------|
| Project #:     | 12607353           |
| Date:          | 5/23/2019          |
| Test Engineer: | 39006              |
| Configuration: | EUT Only           |
| Mode:          | LTE 17 16QAM 10MHz |
| Chamber #:     | Chamber A          |

| Frequency (GHz)     | Meter Reading (dBm) | Det | AF T346 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|---------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Mid Channel, 710MHz |                     |     |                |              |              |                         |                 |             |          |
| 1.45                | -70.57              | Pk  | 28.3           | -32.5        | 11.7         | -63.07                  | -13             | -50.07      | H        |
| 1.46                | -69.23              | Pk  | 28.3           | -32.5        | 12.3         | -61.13                  | -13             | -48.13      | V        |
| 2.004               | -69.69              | Pk  | 31.6           | -31.9        | 11.5         | -58.49                  | -13             | -45.49      | H        |
| 2.007               | -69.18              | Pk  | 31.7           | -31.9        | 12.9         | -56.48                  | -13             | -43.48      | V        |
| 2.87                | -68.23              | Pk  | 32.1           | -30.6        | 11.7         | -55.03                  | -13             | -42.03      | H        |
| 2.875               | -70.38              | Pk  | 32.2           | -30.7        | 12.6         | -56.28                  | -13             | -43.28      | V        |

Pk - Peak detector

### 9.2.7. LTE BAND 25

|                |                   |
|----------------|-------------------|
| Company:       |                   |
| Project #:     | 12607353          |
| Date:          | 4/12/2019         |
| Test Engineer: | 31300             |
| Configuration: | EUT Only          |
| Mode:          | LTE 25 QPSK 20MHz |
| Chamber #:     | Chamber B         |

| Frequency (GHz)        | Meter Reading (dBm) | Det | AF T344 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|------------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 1860MHz   |                     |     |                |              |              |                         |                 |             |          |
| 2.698                  | -66.27              | Pk  | 32.4           | -31          | 11.9         | -52.97                  | -13             | -39.97      | H        |
| 3.812                  | -65.58              | Pk  | 33.5           | -29.4        | 11.2         | -50.28                  | -13             | -37.28      | H        |
| 12.446                 | -71.43              | Pk  | 39             | -20.6        | 10.9         | -42.13                  | -13             | -29.13      | H        |
| 2.174                  | -66.46              | Pk  | 31.2           | -31.5        | 12.4         | -54.36                  | -13             | -41.36      | V        |
| 6.494                  | -68.91              | Pk  | 35.5           | -26.1        | 11.3         | -48.21                  | -13             | -35.21      | V        |
| 13.626                 | -70.66              | Pk  | 38.6           | -20.9        | 10.9         | -42.06                  | -13             | -29.06      | V        |
| Mid Channel, 1882.5MHz |                     |     |                |              |              |                         |                 |             |          |
| 4.189                  | -67.19              | Pk  | 33.7           | -29.2        | 11.5         | -51.19                  | -13             | -38.19      | V        |
| 2.397                  | -67.1               | Pk  | 32             | -31.4        | 13           | -53.5                   | -13             | -40.50      | V        |
| 2.541                  | -65.18              | Pk  | 32.3           | -31.4        | 11.8         | -52.48                  | -13             | -39.48      | H        |
| 2.549                  | -65.55              | Pk  | 32.3           | -31.4        | 12.4         | -52.25                  | -13             | -39.25      | H        |
| 3.43                   | -66.66              | Pk  | 32.7           | -30.1        | 12.1         | -51.96                  | -13             | -38.96      | V        |
| 6.436                  | -69.12              | Pk  | 35.5           | -26.2        | 10.6         | -49.22                  | -13             | -36.22      | H        |
| High Channel, 1905MHz  |                     |     |                |              |              |                         |                 |             |          |
| 3.854                  | -66.72              | Pk  | 33.6           | -29.7        | 11.7         | -51.12                  | -13             | -38.12      | H        |
| 4.852                  | -66.79              | Pk  | 34.1           | -28.6        | 11.3         | -49.99                  | -13             | -36.99      | H        |
| 2.748                  | -66.03              | Pk  | 32.3           | -31.3        | 11.6         | -53.43                  | -13             | -40.43      | V        |
| 3.868                  | -66.44              | Pk  | 33.6           | -29.4        | 11.4         | -50.84                  | -13             | -37.84      | V        |
| 2.53                   | -66.03              | Pk  | 32.3           | -31.4        | 12.2         | -52.93                  | -13             | -39.93      | H        |
| 9.3                    | -73.33              | Pk  | 36.5           | -23.2        | 11           | -49.03                  | -13             | -36.03      | V        |

Pk - Peak detector

|                |                    |
|----------------|--------------------|
| Company:       |                    |
| Project #:     | 12607353           |
| Date:          | 4/12/2019          |
| Test Engineer: | 31300              |
| Configuration: | EUT Only           |
| Mode:          | LTE 25 16QAM 20MHz |
| Chamber #:     | Chamber B          |

| Frequency (GHz)        | Meter Reading (dBm) | Det | AF T344 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|------------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 1860MHz   |                     |     |                |              |              |                         |                 |             |          |
| 4.563                  | -66.4               | Pk  | 34.2           | -28.8        | 10.5         | -50.5                   | -13             | -37.50      | H        |
| 10.672                 | -71.81              | Pk  | 37.8           | -21.1        | 10.7         | -44.41                  | -13             | -31.41      | H        |
| 2.35                   | -66.01              | Pk  | 31.8           | -31.6        | 12.6         | -53.21                  | -13             | -40.21      | V        |
| 3.753                  | -65.66              | Pk  | 33.4           | -29.6        | 11.6         | -50.26                  | -13             | -37.26      | V        |
| 10.794                 | -71.7               | Pk  | 37.9           | -20.8        | 11.1         | -43.5                   | -13             | -30.50      | V        |
| 2.977                  | -66.29              | Pk  | 32.9           | -30.9        | 11.5         | -52.79                  | -13             | -39.79      | H        |
| Mid Channel, 1882.5MHz |                     |     |                |              |              |                         |                 |             |          |
| 2.363                  | -67.74              | Pk  | 31.8           | -31.5        | 13.1         | -54.34                  | -13             | -41.34      | H        |
| 3.954                  | -65.98              | Pk  | 33.6           | -29.6        | 11.2         | -50.78                  | -13             | -37.78      | H        |
| 2.827                  | -65.32              | Pk  | 32.4           | -30.7        | 12.3         | -51.32                  | -13             | -38.32      | V        |
| 3.835                  | -65.9               | Pk  | 33.6           | -29.5        | 11           | -50.8                   | -13             | -37.80      | V        |
| 5.869                  | -68.41              | Pk  | 35.1           | -27.2        | 11.1         | -49.41                  | -13             | -36.41      | V        |
| 9.68                   | -71.54              | Pk  | 36.9           | -22          | 10.9         | -45.74                  | -13             | -32.74      | H        |
| High Channel, 1905MHz  |                     |     |                |              |              |                         |                 |             |          |
| 3.922                  | -65.69              | Pk  | 33.6           | -29.6        | 11.4         | -50.29                  | -13             | -37.29      | H        |
| 2.344                  | -65.8               | Pk  | 31.7           | -31.6        | 12.9         | -52.8                   | -13             | -39.80      | V        |
| 3.93                   | -65.58              | Pk  | 33.6           | -29.5        | 11.5         | -49.98                  | -13             | -36.98      | V        |
| 10.868                 | -71.72              | Pk  | 37.9           | -20.9        | 11.2         | -43.52                  | -13             | -30.52      | V        |
| 6.365                  | -68.85              | Pk  | 35.6           | -26.3        | 10.5         | -49.05                  | -13             | -36.05      | H        |
| 7.08                   | -69.48              | Pk  | 35.5           | -24.8        | 10.7         | -48.08                  | -13             | -35.08      | H        |

Pk - Peak detector

### 9.2.8. LTE BAND 26 (PART 90S)

|                |                        |
|----------------|------------------------|
| Project #:     | 12607353               |
| Date:          | 4/12/2019              |
| Test Engineer: | 31300                  |
| Configuration: | EUT Only               |
| Mode:          | LTE 26(90s) QPSK 10MHz |
| Chamber #:     | Chamber B              |

| Frequency (GHz)     | Meter Reading (dBm) | Det | AF T344 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|---------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Mid Channel, 819MHz |                     |     |                |              |              |                         |                 |             |          |
| 2.329               | -66.4               | Pk  | 31.8           | -31.7        | 12.5         | -53.8                   | -13             | -40.80      | H        |
| 1.708               | -67.04              | Pk  | 29.1           | -32.2        | 13           | -57.14                  | -13             | -44.14      | V        |
| 3.743               | -65.98              | Pk  | 33.4           | -29.9        | 11.4         | -51.08                  | -13             | -38.08      | V        |
| 3.058               | -66.81              | Pk  | 33             | -30.7        | 12           | -52.51                  | -13             | -39.51      | H        |
| 4.487               | -65.71              | Pk  | 34             | -29.2        | 11.3         | -49.61                  | -13             | -36.61      | H        |
| 7.968               | -70.12              | Pk  | 35.8           | -24.3        | 11.4         | -47.22                  | -13             | -34.22      | V        |

|                |                         |
|----------------|-------------------------|
| Project #:     | 12607353                |
| Date:          | 4/12/2019               |
| Test Engineer: | 31300                   |
| Configuration: | EUT Only                |
| Mode:          | LTE 26(90s) 16QAM 10MHz |
| Chamber #:     | Chamber B               |

| Frequency (GHz)     | Meter Reading (dBm) | Det | AF T344 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|---------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Mid Channel, 819MHz |                     |     |                |              |              |                         |                 |             |          |
| 4.86                | -67.13              | Pk  | 34.1           | -28.5        | 11.4         | -50.13                  | -13             | -37.13      | H        |
| 3.824               | -65.39              | Pk  | 33.5           | -29.3        | 11.1         | -50.09                  | -13             | -37.09      | V        |
| 2.116               | -65.34              | Pk  | 31.3           | -31.8        | 12.7         | -53.14                  | -13             | -40.14      | H        |
| 2.443               | -66.47              | Pk  | 32.3           | -31.4        | 12           | -53.57                  | -13             | -40.57      | V        |
| 8.889               | -70.58              | Pk  | 36.2           | -23.6        | 11.2         | -46.78                  | -13             | -33.78      | V        |
| 9.646               | -70.95              | Pk  | 37             | -22.4        | 10.8         | -45.55                  | -13             | -32.55      | H        |

Pk - Peak detector

### 9.2.9. LTE BAND 30

|                |                   |
|----------------|-------------------|
| Project #:     | 12607353          |
| Date:          | 4/12/2019         |
| Test Engineer: | 12501             |
| Configuration: | EUT Only          |
| Mode:          | LTE 30 QPSK 10MHz |
| Chamber #:     | Chamber B         |

| Frequency (GHz)      | Meter Reading (dBm) | Det | AF T344 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Mid Channel, 2310MHz |                     |     |                |              |              |                         |                 |             |          |
| 4.555                | -67.09              | Pk  | 34.2           | -28.8        | 10.8         | -50.89                  | -40             | -10.89      | H        |
| 9.194                | -71.86              | Pk  | 36.4           | -22.7        | 11           | -47.16                  | -40             | -7.16       | H        |
| 4.624                | -66.39              | Pk  | 34.2           | -29          | 10.4         | -50.79                  | -40             | -10.79      | V        |
| 9.162                | -72.53              | Pk  | 36.4           | -22.8        | 11.2         | -47.73                  | -40             | -7.73       | V        |
| 6.797                | -69.87              | Pk  | 35.5           | -25.7        | 10.7         | -49.37                  | -40             | -9.37       | V        |
| 6.881                | -71.77              | Pk  | 35.6           | -24.9        | 10.6         | -50.47                  | -40             | -10.47      | H        |

|                |                    |
|----------------|--------------------|
| Project #:     | 12607353           |
| Date:          | 4/12/2019          |
| Test Engineer: | 12501              |
| Configuration: | EUT Only           |
| Mode:          | LTE 30 16QAM 10MHz |
| Chamber #:     | Chamber B          |

| Frequency (GHz)      | Meter Reading (dBm) | Det | AF T344 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Mid Channel, 2310MHz |                     |     |                |              |              |                         |                 |             |          |
| 4.62                 | -68.03              | Pk  | 34.2           | -28.9        | 10.7         | -52.03                  | -40             | -12.03      | H        |
| 9.159                | -71.78              | Pk  | 36.4           | -22.8        | 11.1         | -47.08                  | -40             | -7.08       | H        |
| 4.566                | -67.95              | Pk  | 34.2           | -28.7        | 10.7         | -51.75                  | -40             | -11.75      | V        |
| 9.06                 | -70.26              | Pk  | 36.4           | -23.5        | 11.2         | -46.16                  | -40             | -6.16       | V        |
| 6.932                | -70.21              | Pk  | 35.6           | -25.1        | 10.8         | -48.91                  | -40             | -8.91       | H        |
| 6.999                | -70.89              | Pk  | 35.6           | -25.1        | 11.1         | -49.29                  | -40             | -9.29       | V        |

Pk - Peak detector

### 9.2.10. LTE BAND 41

|                |                   |
|----------------|-------------------|
| Company:       |                   |
| Project #:     | 12607353          |
| Date:          | 4/12/2019         |
| Test Engineer: | 12501             |
| Configuration: | EUT Only          |
| Mode:          | LTE 41 QPSK 20MHz |
| Chamber #:     | Chamber B         |

| Frequency (GHz)       | Meter Reading (dBm) | Det | AF T344 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|-----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 2506MHz  |                     |     |                |              |              |                         |                 |             |          |
| 5.045                 | -67.28              | Pk  | 34.2           | -28.5        | 11.1         | -50.48                  | -25             | -25.48      | H        |
| 7.494                 | -71.99              | Pk  | 35.6           | -24.5        | 10.8         | -50.09                  | -25             | -25.09      | H        |
| 5.109                 | -67.44              | Pk  | 34.2           | -28.3        | 11.2         | -50.34                  | -25             | -25.34      | V        |
| 7.356                 | -70.5               | Pk  | 35.6           | -24.6        | 11.1         | -48.4                   | -25             | -23.40      | V        |
| 10.096                | -72.99              | Pk  | 37.3           | -21.9        | 10.6         | -46.99                  | -25             | -21.99      | V        |
| 10.11                 | -72.07              | Pk  | 37.3           | -21.8        | 10.6         | -45.97                  | -25             | -20.97      | H        |
| Mid Channel, 2593MHz  |                     |     |                |              |              |                         |                 |             |          |
| 7.713                 | -70.91              | Pk  | 35.8           | -24.5        | 10.8         | -48.81                  | -25             | -23.81      | H        |
| 7.73                  | -68.86              | Pk  | 35.7           | -24.6        | 11.2         | -46.56                  | -25             | -21.56      | V        |
| 5.166                 | -67.33              | Pk  | 34.2           | -28.5        | 11.6         | -50.03                  | -25             | -25.03      | V        |
| 5.168                 | -67.75              | Pk  | 34.2           | -28.5        | 11.6         | -50.45                  | -25             | -25.45      | H        |
| 10.18                 | -72.73              | Pk  | 37.3           | -21.5        | 10.6         | -46.33                  | -25             | -21.33      | V        |
| 10.3                  | -72.12              | Pk  | 37.4           | -21.3        | 10.2         | -45.82                  | -25             | -20.82      | H        |
| High Channel, 2680MHz |                     |     |                |              |              |                         |                 |             |          |
| 5.352                 | -68.22              | Pk  | 34.6           | -27.9        | 11.1         | -50.42                  | -25             | -25.42      | H        |
| 8.04                  | -71.61              | Pk  | 35.9           | -24.4        | 11.3         | -48.81                  | -25             | -23.81      | H        |
| 10.793                | -72.33              | Pk  | 37.9           | -20.7        | 10.8         | -44.33                  | -25             | -19.33      | H        |
| 8.089                 | -70.95              | Pk  | 35.9           | -24.1        | 11.1         | -48.05                  | -25             | -23.05      | V        |
| 10.844                | -72.73              | Pk  | 38             | -20.2        | 10.8         | -44.13                  | -25             | -19.13      | V        |
| 5.296                 | -68.38              | Pk  | 34.4           | -27.9        | 11           | -50.88                  | -25             | -25.88      | V        |

Pk - Peak detector

|                |                    |
|----------------|--------------------|
| Company:       |                    |
| Project #:     | 12607353           |
| Date:          | 4/12/2019          |
| Test Engineer: | 12501              |
| Configuration: | EUT Only           |
| Mode:          | LTE 41 16QAM 20MHz |
| Chamber #:     | Chamber B          |

| Frequency (GHz)       | Meter Reading (dBm) | Det | AF T344 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|-----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 2506MHz  |                     |     |                |              |              |                         |                 |             |          |
| 4.978                 | -68.01              | Pk  | 34             | -28.5        | 11.1         | -51.41                  | -25             | -26.41      | H        |
| 7.475                 | -70.61              | Pk  | 35.7           | -24.6        | 10.6         | -48.91                  | -25             | -23.91      | H        |
| 4.864                 | -68.15              | Pk  | 34.1           | -28.4        | 11.3         | -51.15                  | -25             | -26.15      | V        |
| 7.561                 | -72.13              | Pk  | 35.7           | -24.4        | 11.2         | -49.63                  | -25             | -24.63      | V        |
| 9.806                 | -72.06              | Pk  | 37             | -22.3        | 11.1         | -46.26                  | -25             | -21.26      | V        |
| 9.975                 | -73.3               | Pk  | 37.2           | -22.3        | 10.6         | -47.8                   | -25             | -22.80      | H        |
| Mid Channel, 2593MHz  |                     |     |                |              |              |                         |                 |             |          |
| 5.116                 | -68.1               | Pk  | 34.2           | -28.5        | 10.9         | -51.5                   | -25             | -26.50      | V        |
| 7.716                 | -71.23              | Pk  | 35.8           | -24.5        | 11           | -48.93                  | -25             | -23.93      | V        |
| 5.17                  | -67.08              | Pk  | 34.2           | -28.5        | 11.6         | -49.78                  | -25             | -24.78      | H        |
| 7.783                 | -70.43              | Pk  | 35.8           | -24.4        | 11           | -48.03                  | -25             | -23.03      | H        |
| 10.196                | -71.9               | Pk  | 37.3           | -21.6        | 10.3         | -45.9                   | -25             | -20.90      | V        |
| 10.352                | -73.07              | Pk  | 37.5           | -21.2        | 9.9          | -46.87                  | -25             | -21.87      | H        |
| High Channel, 2680MHz |                     |     |                |              |              |                         |                 |             |          |
| 10.671                | -72.79              | Pk  | 37.8           | -21          | 10.7         | -45.29                  | -25             | -20.29      | H        |
| 10.673                | -71.73              | Pk  | 37.8           | -21.1        | 10.9         | -44.13                  | -25             | -19.13      | V        |
| 5.22                  | -69.66              | Pk  | 34.3           | -28.2        | 11.2         | -52.36                  | -25             | -27.36      | V        |
| 5.285                 | -69.36              | Pk  | 34.4           | -27.9        | 10.9         | -51.96                  | -25             | -26.96      | H        |
| 8.019                 | -70.75              | Pk  | 35.8           | -24.1        | 11           | -48.05                  | -25             | -23.05      | H        |
| 8.022                 | -70.64              | Pk  | 35.9           | -24.2        | 11.3         | -47.64                  | -25             | -22.64      | V        |

Pk - Peak detector

### 9.2.11. LTE BAND 66

|                |                   |
|----------------|-------------------|
| Company:       |                   |
| Project #:     | 12607353          |
| Date:          | 4/13/2019         |
| Test Engineer: | 31300             |
| Configuration: | EUT Only          |
| Mode:          | LTE 66 QPSK 20MHz |
| Chamber #:     | Chamber B         |

| Frequency (GHz)       | Meter Reading (dBm) | Det | AF T344 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|-----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 1720MHz  |                     |     |                |              |              |                         |                 |             |          |
| 3.816                 | -65.7               | Pk  | 33.5           | -29.5        | 11.6         | -50.1                   | -13             | -37.10      | H        |
| 3.941                 | -66.8               | Pk  | 33.6           | -29.4        | 11.4         | -51.2                   | -13             | -38.20      | V        |
| 2.12                  | -58.61              | Pk  | 31.3           | -31.8        | 13.1         | -46.01                  | -13             | -33.01      | H        |
| 2.12                  | -61.31              | Pk  | 31.3           | -31.8        | 12.5         | -49.31                  | -13             | -36.31      | V        |
| 5.809                 | -67.71              | Pk  | 35             | -27.2        | 10.8         | -49.11                  | -13             | -36.11      | H        |
| 7.813                 | -70.53              | Pk  | 35.8           | -24.3        | 11.5         | -47.53                  | -13             | -34.53      | V        |
| Mid Channel, 1745MHz  |                     |     |                |              |              |                         |                 |             |          |
| 3.826                 | -65.76              | Pk  | 33.5           | -29.1        | 11.4         | -49.96                  | -13             | -36.96      | H        |
| 3.878                 | -65.62              | Pk  | 33.6           | -29.4        | 12           | -49.42                  | -13             | -36.42      | V        |
| 2.145                 | -58.09              | Pk  | 31.3           | -31.7        | 12           | -46.49                  | -13             | -33.49      | H        |
| 2.53                  | -65.41              | Pk  | 32.3           | -31.4        | 12.1         | -52.41                  | -13             | -39.41      | V        |
| 9.658                 | -70.57              | Pk  | 36.9           | -22.1        | 10.8         | -44.97                  | -13             | -31.97      | H        |
| 13.632                | -70.59              | Pk  | 38.9           | -20.7        | 10.6         | -41.79                  | -13             | -28.79      | V        |
| High Channel, 1770MHz |                     |     |                |              |              |                         |                 |             |          |
| 3.848                 | -65.65              | Pk  | 33.6           | -29.6        | 11.1         | -50.55                  | -13             | -37.55      | H        |
| 5.09                  | -66.63              | Pk  | 34.1           | -28.5        | 10.8         | -50.23                  | -13             | -37.23      | H        |
| 9.36                  | -70.5               | Pk  | 36.5           | -22.8        | 10.8         | -46                     | -13             | -33.00      | H        |
| 3.875                 | -65.31              | Pk  | 33.6           | -29.5        | 12.2         | -49.01                  | -13             | -36.01      | V        |
| 10.847                | -72.08              | Pk  | 37.9           | -20.2        | 10.9         | -43.48                  | -13             | -30.48      | V        |
| 2.634                 | -66.01              | Pk  | 32.4           | -31          | 13           | -51.61                  | -13             | -38.61      | V        |

Pk - Peak detector

|                |                    |
|----------------|--------------------|
| Company:       |                    |
| Project #:     | 12607353           |
| Date:          | 4/13/2019          |
| Test Engineer: | 31300              |
| Configuration: | EUT Only           |
| Mode:          | LTE 66 16QAM 20MHz |
| Chamber #:     | Chamber B          |

| Frequency (GHz)       | Meter Reading (dBm) | Det | AF T344 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|-----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 1720MHz  |                     |     |                |              |              |                         |                 |             |          |
| 3.869                 | -65.09              | Pk  | 33.6           | -29.4        | 11.5         | -49.39                  | -13             | -36.39      | H        |
| 3.873                 | -65.79              | Pk  | 33.6           | -29.5        | 12.1         | -49.59                  | -13             | -36.59      | V        |
| 11.467                | -71.52              | Pk  | 38.2           | -20.8        | 10.8         | -43.32                  | -13             | -30.32      | V        |
| 2.12                  | -59.22              | Pk  | 31.3           | -31.8        | 13.1         | -46.62                  | -13             | -33.62      | H        |
| 2.12                  | -60.47              | Pk  | 31.3           | -31.8        | 12.5         | -48.47                  | -13             | -35.47      | V        |
| 7.005                 | -69.84              | Pk  | 35.6           | -25          | 10.8         | -48.44                  | -13             | -35.44      | H        |
| Mid Channel, 1745MHz  |                     |     |                |              |              |                         |                 |             |          |
| 3.858                 | -65.76              | Pk  | 33.6           | -29.6        | 12           | -49.76                  | -13             | -36.76      | H        |
| 3.877                 | -65.04              | Pk  | 33.6           | -29.4        | 12.1         | -48.74                  | -13             | -35.74      | V        |
| 4.743                 | -67.38              | Pk  | 34.1           | -28.2        | 10.8         | -50.68                  | -13             | -37.68      | V        |
| 2.138                 | -58.51              | Pk  | 31.3           | -31.8        | 12.2         | -46.81                  | -13             | -33.81      | H        |
| 2.393                 | -65.88              | Pk  | 32             | -31.4        | 13.1         | -52.18                  | -13             | -39.18      | V        |
| 6.471                 | -69.02              | Pk  | 35.5           | -25.9        | 10           | -49.42                  | -13             | -36.42      | H        |
| High Channel, 1770MHz |                     |     |                |              |              |                         |                 |             |          |
| 3.923                 | -66.08              | Pk  | 33.6           | -29.6        | 11.5         | -50.58                  | -13             | -37.58      | H        |
| 3.82                  | -65.53              | Pk  | 33.5           | -29.5        | 11.3         | -50.23                  | -13             | -37.23      | V        |
| 2.465                 | -66.88              | Pk  | 32.4           | -31.6        | 12           | -54.08                  | -13             | -41.08      | H        |
| 5.847                 | -68.3               | Pk  | 35.1           | -27.4        | 10.8         | -49.8                   | -13             | -36.80      | V        |
| 6.562                 | -69.52              | Pk  | 35.5           | -26          | 10.9         | -49.12                  | -13             | -36.12      | H        |
| 9.651                 | -70.94              | Pk  | 36.9           | -22.3        | 11           | -45.34                  | -13             | -32.34      | V        |

Pk - Peak detector

### 9.3. FIELD STRENGTH OF SPURIOUS RADIATION, ANT 3

#### 9.3.1. LTE BAND 2

|                |                  |
|----------------|------------------|
| Company:       |                  |
| Project #:     | 12607353         |
| Date:          | 4/17/2019        |
| Test Engineer: | 31300            |
| Configuration: | EUT Only         |
| Mode:          | LTE 2 QPSK 20MHz |
| Chamber #:     | Chamber B        |

| Frequency (GHz)      | Meter Reading (dBm) | Det | AF T344 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 1860MHz |                     |     |                |              |              |                         |                 |             |          |
| 3.877                | -65.87              | Pk  | 33.6           | -29.4        | 11.8         | -49.87                  | -13             | -36.87      | H        |
| 4.229                | -66.28              | Pk  | 33.7           | -29.3        | 11.7         | -50.18                  | -13             | -37.18      | H        |
| 5.1                  | -67.34              | Pk  | 34.2           | -28.4        | 11.3         | -50.24                  | -13             | -37.24      | H        |
| 3.768                | -65.37              | Pk  | 33.4           | -29.7        | 11.1         | -50.57                  | -13             | -37.57      | V        |
| 12.514               | -72.09              | Pk  | 39.1           | -20.4        | 10.7         | -42.69                  | -13             | -29.69      | V        |
| 7.988                | -70.2               | Pk  | 35.9           | -24.3        | 11.5         | -47.1                   | -13             | -34.10      | V        |
| Mid Channel, 1880MHz |                     |     |                |              |              |                         |                 |             |          |
| 3.853                | -66.43              | Pk  | 33.6           | -29.7        | 11.5         | -51.03                  | -13             | -38.03      | H        |
| 3.801                | -66.09              | Pk  | 33.5           | -29.6        | 11.4         | -50.79                  | -13             | -37.79      | V        |
| 5.61                 | -68.01              | Pk  | 34.9           | -28.1        | 10.5         | -50.71                  | -13             | -37.71      | H        |
| 5.613                | -67.12              | Pk  | 35             | -28.1        | 10.8         | -49.42                  | -13             | -36.42      | V        |
| 10.114               | -71.24              | Pk  | 37.3           | -21.7        | 10.6         | -45.04                  | -13             | -32.04      | V        |
| 13.668               | -71.13              | Pk  | 38.8           | -20.6        | 10.6         | -42.33                  | -13             | -29.33      | H        |
| HighChannel, 1900MHz |                     |     |                |              |              |                         |                 |             |          |
| 3.919                | -66.13              | Pk  | 33.6           | -29.7        | 11.3         | -50.93                  | -13             | -37.93      | H        |
| 3.788                | -65.46              | Pk  | 33.5           | -29.7        | 11.5         | -50.16                  | -13             | -37.16      | V        |
| 8.121                | -70.4               | Pk  | 35.8           | -23.9        | 11.3         | -47.2                   | -13             | -34.20      | V        |
| 11.101               | -72.74              | Pk  | 37.9           | -21          | 11.1         | -44.74                  | -13             | -31.74      | V        |
| 5.228                | -68.27              | Pk  | 34.3           | -28.3        | 11.2         | -51.07                  | -13             | -38.07      | H        |
| 8.989                | -69.42              | Pk  | 36.3           | -23.7        | 11.2         | -45.62                  | -13             | -32.62      | H        |

Pk - Peak detector

|                |                   |
|----------------|-------------------|
| Company:       |                   |
| Project #:     | 12607353          |
| Date:          | 4/17/2019         |
| Test Engineer: | 31300             |
| Configuration: | EUT Only          |
| Mode:          | LTE 2 16QAM 20MHz |
| Chamber #:     | Chamber B         |

| Frequency (GHz)      | Meter Reading (dBm) | Det | AF T344 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 1860MHz |                     |     |                |              |              |                         |                 |             |          |
| 3.853                | -66.33              | Pk  | 33.6           | -29.7        | 11.5         | -50.93                  | -13             | -37.93      | H        |
| 11.111               | -72.59              | Pk  | 37.9           | -21.1        | 10.7         | -45.09                  | -13             | -32.09      | H        |
| 3.889                | -66.52              | Pk  | 33.6           | -29.3        | 11.2         | -51.02                  | -13             | -38.02      | V        |
| 2.63                 | -66.47              | Pk  | 32.4           | -31.1        | 12.8         | -52.37                  | -13             | -39.37      | V        |
| 13.617               | -71.01              | Pk  | 38.6           | -20.8        | 11.1         | -42.11                  | -13             | -29.11      | H        |
| 13.668               | -71.02              | Pk  | 38.8           | -20.6        | 10.3         | -42.52                  | -13             | -29.52      | V        |
| Mid Channel, 1880MHz |                     |     |                |              |              |                         |                 |             |          |
| 3.887                | -65.86              | Pk  | 33.6           | -29.3        | 11.2         | -50.36                  | -13             | -37.36      | H        |
| 3.87                 | -66.12              | Pk  | 33.6           | -29.4        | 11.7         | -50.22                  | -13             | -37.22      | V        |
| 3.004                | -66.54              | Pk  | 32.9           | -30.7        | 11.8         | -52.54                  | -13             | -39.54      | H        |
| 8.646                | -71.03              | Pk  | 36             | -23.7        | 11.2         | -47.53                  | -13             | -34.53      | V        |
| 13.686               | -71.2               | Pk  | 38.7           | -20.9        | 10.9         | -42.5                   | -13             | -29.50      | H        |
| 16.57                | -72.01              | Pk  | 41.7           | -19.8        | 10.9         | -39.21                  | -13             | -26.21      | V        |
| HighChannel, 1900MHz |                     |     |                |              |              |                         |                 |             |          |
| 4.55                 | -65.71              | Pk  | 34.2           | -28.9        | 10.8         | -49.61                  | -13             | -36.61      | H        |
| 10.858               | -71.61              | Pk  | 37.9           | -20.5        | 11.3         | -42.91                  | -13             | -29.91      | V        |
| 3.206                | -67.4               | Pk  | 33             | -30.7        | 11.8         | -53.3                   | -13             | -40.30      | H        |
| 4.421                | -66.05              | Pk  | 33.9           | -29.2        | 11.4         | -49.95                  | -13             | -36.95      | V        |
| 13.6                 | -70.49              | Pk  | 38.7           | -20.4        | 10.6         | -41.59                  | -13             | -28.59      | H        |
| 15.026               | -71.68              | Pk  | 39.8           | -20.3        | 10.3         | -41.88                  | -13             | -28.88      | V        |

Pk - Peak detector

### 9.3.2. LTE BAND 7

|                |                  |
|----------------|------------------|
| Company:       |                  |
| Project #:     | 12607353         |
| Date:          | 5/20/2019        |
| Test Engineer: | 39006            |
| Configuration: | EUT Only         |
| Mode:          | LTE 7 QPSK 20MHz |
| Chamber #:     | Chamber A        |

| Frequency (GHz)       | Meter Reading (dBm) | Det | AF T346 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|-----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 2510MHz  |                     |     |                |              |              |                         |                 |             |          |
| 3.708                 | -67.3               | Pk  | 33.2           | -29.8        | 11.2         | -52.7                   | -25             | -27.70      | H        |
| 7.729                 | -70.8               | Pk  | 35.8           | -24.6        | 11           | -48.6                   | -25             | -23.60      | H        |
| 7.66                  | -69.92              | Pk  | 35.7           | -24.6        | 11.2         | -47.62                  | -25             | -22.62      | V        |
| 3.792                 | -66.14              | Pk  | 33.5           | -29.7        | 11.5         | -50.84                  | -25             | -25.84      | V        |
| 13.631                | -71.03              | Pk  | 38.9           | -20.7        | 11           | -41.83                  | -25             | -16.83      | H        |
| 13.636                | -71.34              | Pk  | 38.6           | -20.8        | 10.5         | -43.04                  | -25             | -18.04      | V        |
| Mid Channel, 2535MHz  |                     |     |                |              |              |                         |                 |             |          |
| 5.101                 | -67.89              | Pk  | 34.2           | -28.4        | 11.3         | -50.79                  | -25             | -25.79      | H        |
| 7.613                 | -71.51              | Pk  | 35.7           | -24.4        | 10.8         | -49.41                  | -25             | -24.41      | H        |
| 5.05                  | -67.7               | Pk  | 34.2           | -28.5        | 11.2         | -50.8                   | -25             | -25.80      | V        |
| 7.578                 | -68.32              | Pk  | 35.7           | -24.3        | 10.9         | -46.02                  | -25             | -21.02      | V        |
| 10.079                | -72.91              | Pk  | 37.4           | -22          | 10.3         | -47.21                  | -25             | -22.21      | V        |
| 10.178                | -72.35              | Pk  | 37.3           | -21.4        | 10.6         | -45.85                  | -25             | -20.85      | H        |
| High Channel, 2560MHz |                     |     |                |              |              |                         |                 |             |          |
| 5.116                 | -67.56              | Pk  | 34.2           | -28.5        | 11.1         | -50.76                  | -25             | -25.76      | H        |
| 7.681                 | -70.49              | Pk  | 35.8           | -24.5        | 11.2         | -47.99                  | -25             | -22.99      | H        |
| 5.102                 | -65.85              | Pk  | 34.2           | -28.4        | 11.4         | -48.65                  | -25             | -23.65      | V        |
| 7.648                 | -70.92              | Pk  | 35.7           | -24.5        | 11.1         | -48.62                  | -25             | -23.62      | V        |
| 10.114                | -72.29              | Pk  | 37.3           | -21.7        | 10.6         | -46.09                  | -25             | -21.09      | V        |
| 10.215                | -72.47              | Pk  | 37.4           | -21.5        | 9.7          | -46.87                  | -25             | -21.87      | H        |

Pk - Peak detector

|                |                   |
|----------------|-------------------|
| Company:       |                   |
| Project #:     | 12607353          |
| Date:          | 5/20/2019         |
| Test Engineer: | 12501             |
| Configuration: | EUT Only          |
| Mode:          | LTE 7 16QAM 20MHz |
| Chamber #:     | Chamber A         |

| Frequency (GHz)      | Meter Reading (dBm) | Det | AF T346 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 2510MHz |                     |     |                |              |              |                         |                 |             |          |
| 4.973                | -67.89              | Pk  | 34             | -28.5        | 11.1         | -51.29                  | -25             | -26.29      | H        |
| 7.596                | -71.51              | Pk  | 35.7           | -24.4        | 10.5         | -49.71                  | -25             | -24.71      | H        |
| 4.994                | -68.43              | Pk  | 34.1           | -28.4        | 10.9         | -51.83                  | -25             | -26.83      | V        |
| 7.512                | -71.35              | Pk  | 35.6           | -24.5        | 10.9         | -49.35                  | -25             | -24.35      | V        |
| 10.062               | -72.88              | Pk  | 37.2           | -22.1        | 10.1         | -47.68                  | -25             | -22.68      | H        |
| 10.077               | -72.82              | Pk  | 37.4           | -22          | 10.4         | -47.02                  | -25             | -22.02      | V        |
| Mid Channel, 2535MHz |                     |     |                |              |              |                         |                 |             |          |
| 5.098                | -68.68              | Pk  | 34.2           | -28.5        | 11.3         | -51.68                  | -25             | -26.68      | H        |
| 7.578                | -62.89              | Pk  | 35.7           | -24.3        | 10.6         | -40.89                  | -25             | -15.89      | H        |
| 7.578                | -67.49              | Pk  | 35.7           | -24.3        | 10.9         | -45.19                  | -25             | -20.19      | V        |
| 5.17                 | -68.15              | Pk  | 34.2           | -28.5        | 11.5         | -50.95                  | -25             | -25.95      | V        |
| 10.18                | -72.25              | Pk  | 37.3           | -21.4        | 10.7         | -45.65                  | -25             | -20.65      | V        |
| 10.229               | -72.6               | Pk  | 37.4           | -21.6        | 10           | -46.8                   | -25             | -21.80      | H        |
| Mid Channel, 2560MHz |                     |     |                |              |              |                         |                 |             |          |
| 5.115                | -67.77              | Pk  | 34.2           | -28.5        | 11.2         | -50.87                  | -25             | -25.87      | H        |
| 7.749                | -69.97              | Pk  | 35.8           | -24.3        | 11.2         | -47.27                  | -25             | -22.27      | H        |
| 5.118                | -67.51              | Pk  | 34.2           | -28.5        | 10.9         | -50.91                  | -25             | -25.91      | V        |
| 7.647                | -70.89              | Pk  | 35.7           | -24.5        | 11.1         | -48.59                  | -25             | -23.59      | V        |
| 10.283               | -72.5               | Pk  | 37.4           | -21.5        | 10.3         | -46.3                   | -25             | -21.30      | V        |
| 10.3                 | -72.59              | Pk  | 37.4           | -21.3        | 10.2         | -46.29                  | -25             | -21.29      | H        |

Pk - Peak detector

### 9.3.3. LTE BAND 25

|                |                   |
|----------------|-------------------|
| Company:       |                   |
| Project #:     | 12607353          |
| Date:          | 4/18/2019         |
| Test Engineer: | 31300             |
| Configuration: | EUT Only          |
| Mode:          | LTE 25 QPSK 20MHz |
| Chamber #:     | Chamber B         |

| Frequency (GHz)        | Meter Reading (dBm) | Det | AF T344 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|------------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 1860MHz   |                     |     |                |              |              |                         |                 |             |          |
| 3.938                  | -66.18              | Pk  | 33.6           | -29.4        | 11.5         | -50.48                  | -13             | -37.48      | H        |
| 7.702                  | -70.04              | Pk  | 35.8           | -24.6        | 10.9         | -47.94                  | -13             | -34.94      | H        |
| 10.878                 | -71.87              | Pk  | 37.9           | -20.9        | 10.5         | -44.37                  | -13             | -31.37      | H        |
| 3.808                  | -66.12              | Pk  | 33.5           | -29.4        | 11.1         | -50.92                  | -13             | -37.92      | V        |
| 6.323                  | -68.4               | Pk  | 35.6           | -26.3        | 10.9         | -48.2                   | -13             | -35.20      | V        |
| 13.614                 | -71.24              | Pk  | 38.9           | -20.7        | 10.6         | -42.44                  | -13             | -29.44      | V        |
| Mid Channel, 1882.5MHz |                     |     |                |              |              |                         |                 |             |          |
| 3.871                  | -65.56              | Pk  | 33.6           | -29.5        | 11.8         | -49.66                  | -13             | -36.66      | H        |
| 10.672                 | -72.62              | Pk  | 37.8           | -21.1        | 10.7         | -45.22                  | -13             | -32.22      | H        |
| 3.86                   | -66.9               | Pk  | 33.5           | -29.6        | 11.4         | -51.6                   | -13             | -38.60      | V        |
| 6.271                  | -69.7               | Pk  | 35.7           | -26.4        | 10.9         | -49.5                   | -13             | -36.50      | H        |
| 6.457                  | -69.28              | Pk  | 35.5           | -26          | 10.9         | -48.88                  | -13             | -35.88      | V        |
| 9.84                   | -71.22              | Pk  | 37.1           | -22          | 10.8         | -45.32                  | -13             | -32.32      | V        |
| High Channel, 1905MHz  |                     |     |                |              |              |                         |                 |             |          |
| 3.877                  | -65.66              | Pk  | 33.6           | -29.4        | 11.8         | -49.66                  | -13             | -36.66      | H        |
| 3.876                  | -66.32              | Pk  | 33.6           | -29.5        | 12.2         | -50.02                  | -13             | -37.02      | V        |
| 6.455                  | -69.27              | Pk  | 35.5           | -26          | 10.8         | -48.97                  | -13             | -35.97      | H        |
| 6.456                  | -69.41              | Pk  | 35.5           | -26          | 10.7         | -49.21                  | -13             | -36.21      | H        |
| 9.665                  | -70.59              | Pk  | 36.9           | -22.1        | 11           | -44.79                  | -13             | -31.79      | V        |
| 14.295                 | -76.04              | Pk  | 39             | -20.4        | 11.2         | -46.24                  | -13             | -33.24      | V        |

Pk - Peak detector

|                |                    |
|----------------|--------------------|
| Company:       |                    |
| Project #:     | 12607353           |
| Date:          | 4/18/2019          |
| Test Engineer: | 31300              |
| Configuration: | EUT Only           |
| Mode:          | LTE 25 16QAM 20MHz |
| Chamber #:     | Chamber B          |

| Frequency (GHz)        | Meter Reading (dBm) | Det | AF T344 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|------------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 1860MHz   |                     |     |                |              |              |                         |                 |             |          |
| 3.927                  | -66.2               | Pk  | 33.6           | -29.6        | 11.5         | -50.7                   | -13             | -37.70      | H        |
| 4.854                  | -67.3               | Pk  | 34.1           | -28.6        | 11.4         | -50.4                   | -13             | -37.40      | H        |
| 3.926                  | -65.64              | Pk  | 33.6           | -29.6        | 11.5         | -50.14                  | -13             | -37.14      | V        |
| 3.143                  | -66.38              | Pk  | 32.9           | -30.5        | 11.4         | -52.58                  | -13             | -39.58      | V        |
| 6.167                  | -69.61              | Pk  | 35.7           | -26.9        | 10.5         | -50.31                  | -13             | -37.31      | H        |
| 13.596                 | -71.22              | Pk  | 39             | -20.3        | 10.2         | -42.32                  | -13             | -29.32      | V        |
| Mid Channel, 1882.5MHz |                     |     |                |              |              |                         |                 |             |          |
| 3.874                  | -65.85              | Pk  | 33.6           | -29.5        | 12           | -49.75                  | -13             | -36.75      | H        |
| 2.56                   | -66.15              | Pk  | 32.3           | -31.4        | 12           | -53.25                  | -13             | -40.25      | H        |
| 2.991                  | -67.28              | Pk  | 32.8           | -30.8        | 11.9         | -53.38                  | -13             | -40.38      | V        |
| 5.879                  | -67.82              | Pk  | 35.2           | -27.1        | 11.2         | -48.52                  | -13             | -35.52      | V        |
| 7.07                   | -70.32              | Pk  | 35.6           | -24.8        | 10.9         | -48.62                  | -13             | -35.62      | V        |
| 13.668                 | -70.58              | Pk  | 38.7           | -20.6        | 10.6         | -41.88                  | -13             | -28.88      | H        |
| High Channel, 1905MHz  |                     |     |                |              |              |                         |                 |             |          |
| 3.94                   | -65.86              | Pk  | 33.6           | -29.4        | 11.6         | -50.06                  | -13             | -37.06      | H        |
| 10.877                 | -71.96              | Pk  | 37.9           | -20.9        | 10.6         | -44.36                  | -13             | -31.36      | H        |
| 3.877                  | -65.88              | Pk  | 33.6           | -29.4        | 12           | -49.68                  | -13             | -36.68      | V        |
| 9.096                  | -71.61              | Pk  | 36.4           | -23.4        | 11.1         | -47.51                  | -13             | -34.51      | V        |
| 5.878                  | -68.09              | Pk  | 35.1           | -27.2        | 11.2         | -48.99                  | -13             | -35.99      | V        |
| 6.323                  | -68.7               | Pk  | 35.6           | -26.3        | 10.7         | -48.7                   | -13             | -35.70      | H        |

Pk - Peak detector

### 9.3.4. LTE BAND 30

|                |                   |
|----------------|-------------------|
| Project #:     | 12607353          |
| Date:          | 4/14/2019         |
| Test Engineer: | 12501             |
| Configuration: | EUT Only          |
| Mode:          | LTE 30 QPSK 10MHz |
| Chamber #:     | Chamber B         |

| Frequency (GHz)      | Meter Reading (dBm) | Det | AF T344 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Mid Channel, 2310MHz |                     |     |                |              |              |                         |                 |             |          |
| 4.539                | -66.94              | Pk  | 34.1           | -29          | 11.2         | -50.64                  | -40             | -10.64      | H        |
| 9.177                | -72.02              | Pk  | 36.4           | -22.9        | 11           | -47.52                  | -40             | -7.52       | H        |
| 9.09                 | -71.31              | Pk  | 36.4           | -23.5        | 11.2         | -47.21                  | -40             | -7.21       | V        |
| 4.433                | -67.31              | Pk  | 33.9           | -29.2        | 11.6         | -51.01                  | -40             | -11.01      | V        |
| 7                    | -70.43              | Pk  | 35.6           | -25.1        | 10.5         | -49.43                  | -40             | -9.43       | H        |
| 7.002                | -71.05              | Pk  | 35.6           | -25.1        | 11.2         | -49.35                  | -40             | -9.35       | V        |

|                |                    |
|----------------|--------------------|
| Project #:     | 12607353           |
| Date:          | 4/14/2019          |
| Test Engineer: | 12501              |
| Configuration: | EUT Only           |
| Mode:          | LTE 30 16QAM 10MHz |
| Chamber #:     | Chamber B          |

| Frequency (GHz)      | Meter Reading (dBm) | Det | AF T344 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Mid Channel, 2310MHz |                     |     |                |              |              |                         |                 |             |          |
| 4.582                | -67.79              | Pk  | 34.2           | -29          | 10.4         | -52.19                  | -40             | -12.19      | H        |
| 9.159                | -71.44              | Pk  | 36.4           | -22.8        | 11.1         | -46.74                  | -40             | -6.74       | H        |
| 9.042                | -71.03              | Pk  | 36.4           | -23.7        | 11.2         | -47.13                  | -40             | -7.13       | V        |
| 4.485                | -66.37              | Pk  | 34             | -29.2        | 11.6         | -49.97                  | -40             | -9.97       | V        |
| 6.932                | -71.7               | Pk  | 35.6           | -25.1        | 10.8         | -50.4                   | -40             | -10.4       | H        |
| 7.001                | -71.09              | Pk  | 35.6           | -25.1        | 11.2         | -49.39                  | -40             | -9.39       | V        |

Pk - Peak detector

### 9.3.5. LTE BAND 41

|                |                   |
|----------------|-------------------|
| Company:       |                   |
| Project #:     | 12607353          |
| Date:          | 4/15/2019         |
| Test Engineer: | 12501             |
| Configuration: | EUT Only          |
| Mode:          | LTE 41 QPSK 20MHz |
| Chamber #:     | Chamber B         |

| Frequency (GHz)       | Meter Reading (dBm) | Det | AF T344 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|-----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 2506MHz  |                     |     |                |              |              |                         |                 |             |          |
| 5.03                  | -67.73              | Pk  | 34.1           | -28.8        | 10.8         | -51.63                  | -25             | -26.63      | H        |
| 7.597                 | -70.5               | Pk  | 35.7           | -24.4        | 10.5         | -48.7                   | -25             | -23.70      | H        |
| 4.994                 | -63.91              | Pk  | 34.1           | -28.4        | 10.9         | -47.31                  | -25             | -22.31      | V        |
| 7.495                 | -70.49              | Pk  | 35.7           | -24.5        | 11           | -48.29                  | -25             | -23.29      | V        |
| 9.874                 | -72.5               | Pk  | 37.1           | -22.1        | 10.9         | -46.6                   | -25             | -21.60      | V        |
| 9.924                 | -72.31              | Pk  | 37.1           | -22.3        | 10.9         | -46.61                  | -25             | -21.61      | H        |
| Mid Channel, 2593MHz  |                     |     |                |              |              |                         |                 |             |          |
| 7.749                 | -70.15              | Pk  | 35.8           | -24.3        | 11.2         | -47.45                  | -25             | -22.45      | V        |
| 5.164                 | -67.65              | Pk  | 34.2           | -28.5        | 11.6         | -50.35                  | -25             | -25.35      | H        |
| 5.168                 | -60.68              | Pk  | 34.2           | -28.5        | 11.6         | -43.38                  | -25             | -18.38      | V        |
| 7.818                 | -71.74              | Pk  | 35.8           | -24.4        | 11           | -49.34                  | -25             | -24.34      | H        |
| 10.318                | -72.01              | Pk  | 37.5           | -21.3        | 10           | -45.81                  | -25             | -20.81      | V        |
| 10.435                | -72.68              | Pk  | 37.6           | -21.6        | 9.8          | -46.88                  | -25             | -21.88      | H        |
| High Channel, 2680MHz |                     |     |                |              |              |                         |                 |             |          |
| 5.383                 | -69.23              | Pk  | 34.6           | -28          | 10.7         | -51.93                  | -25             | -26.93      | H        |
| 8.055                 | -70.73              | Pk  | 35.9           | -24.1        | 11.3         | -47.63                  | -25             | -22.63      | H        |
| 10.792                | -72.66              | Pk  | 37.9           | -20.7        | 10.8         | -44.66                  | -25             | -19.66      | H        |
| 5.352                 | -67.73              | Pk  | 34.6           | -27.9        | 11           | -50.03                  | -25             | -25.03      | V        |
| 8.054                 | -69.93              | Pk  | 35.9           | -24.1        | 11.4         | -46.73                  | -25             | -21.73      | V        |
| 10.791                | -71.86              | Pk  | 37.9           | -20.7        | 11.2         | -43.46                  | -25             | -18.46      | V        |

Pk - Peak detector

|                |                    |
|----------------|--------------------|
| Company:       |                    |
| Project #:     | 12607353           |
| Date:          | 4/15/2019          |
| Test Engineer: | 12501              |
| Configuration: | EUT Only           |
| Mode:          | LTE 41 16QAM 20MHz |
| Chamber #:     | Chamber B          |

| Frequency (GHz)       | Meter Reading (dBm) | Det | AF T344 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|-----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 2506MHz  |                     |     |                |              |              |                         |                 |             |          |
| 5.045                 | -66.98              | Pk  | 34.2           | -28.5        | 11.1         | -50.18                  | -25             | -25.18      | H        |
| 7.494                 | -71.21              | Pk  | 35.6           | -24.5        | 10.8         | -49.31                  | -25             | -24.31      | H        |
| 4.994                 | -64.59              | Pk  | 34.1           | -28.4        | 10.9         | -47.99                  | -25             | -22.99      | V        |
| 7.492                 | -71.03              | Pk  | 35.6           | -24.5        | 11           | -48.93                  | -25             | -23.93      | V        |
| 10.044                | -72.63              | Pk  | 37.3           | -22.1        | 10.4         | -47.03                  | -25             | -22.03      | H        |
| 10.111                | -72.88              | Pk  | 37.3           | -21.8        | 10.7         | -46.68                  | -25             | -21.68      | V        |
| Mid Channel, 2593MHz  |                     |     |                |              |              |                         |                 |             |          |
| 5.1                   | -66.94              | Pk  | 34.2           | -28.4        | 11.3         | -49.84                  | -25             | -24.84      | H        |
| 7.75                  | -69.99              | Pk  | 35.8           | -24.3        | 11.2         | -47.29                  | -25             | -22.29      | V        |
| 5.168                 | -64.31              | Pk  | 34.2           | -28.5        | 11.6         | -47.01                  | -25             | -22.01      | V        |
| 7.818                 | -71.01              | Pk  | 35.8           | -24.4        | 11           | -48.61                  | -25             | -23.61      | H        |
| 10.315                | -72.75              | Pk  | 37.5           | -21.3        | 9.8          | -46.75                  | -25             | -21.75      | H        |
| 10.383                | -72.63              | Pk  | 37.5           | -21.2        | 10.1         | -46.23                  | -25             | -21.23      | V        |
| High Channel, 2680MHz |                     |     |                |              |              |                         |                 |             |          |
| 8.071                 | -71.65              | Pk  | 35.8           | -24          | 11.1         | -48.75                  | -25             | -23.75      | H        |
| 10.723                | -72.5               | Pk  | 37.9           | -21.2        | 10.4         | -45.4                   | -25             | -20.40      | H        |
| 10.689                | -71.57              | Pk  | 37.8           | -21.3        | 10.9         | -44.17                  | -25             | -19.17      | V        |
| 5.183                 | -66.93              | Pk  | 34.3           | -28.5        | 11.1         | -50.03                  | -25             | -25.03      | V        |
| 5.296                 | -69.65              | Pk  | 34.4           | -27.9        | 11           | -52.15                  | -25             | -27.15      | H        |
| 8.021                 | -71.06              | Pk  | 35.9           | -24.1        | 11.3         | -47.96                  | -25             | -22.96      | V        |

Pk - Peak detector

### 9.3.6. LTE BAND 48

|                |                   |
|----------------|-------------------|
| Company:       |                   |
| Project #:     | 12607353          |
| Date:          | 5/21/2019         |
| Test Engineer: | 39006             |
| Configuration: | EUT Only          |
| Mode:          | LTE 48 QPSK 20MHz |
| Chamber #:     | Chamber A         |

| Frequency (GHz)       | Meter Reading (dBm) | Det | AF T346 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|-----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 3560MHz  |                     |     |                |              |              |                         |                 |             |          |
| 10.843                | -75.65              | Pk  | 38             | -20.2        | 10.3         | -47.55                  | -40             | -7.55       | H        |
| 7.103                 | -72.01              | Pk  | 35.6           | -25.3        | 10           | -51.71                  | -40             | -11.71      | H        |
| 7.103                 | -70.35              | Pk  | 35.6           | -25.3        | 10.3         | -49.75                  | -40             | -9.75       | V        |
| 9.67                  | -73.08              | Pk  | 36.9           | -21.9        | 11           | -47.08                  | -40             | -7.08       | V        |
| 13.597                | -74.15              | Pk  | 38.9           | -20.3        | 10.6         | -44.95                  | -40             | -4.95       | H        |
| 13.597                | -73.96              | Pk  | 38.9           | -20.3        | 10.2         | -45.16                  | -40             | -5.16       | V        |
| Mid Channel, 3625MHz  |                     |     |                |              |              |                         |                 |             |          |
| 12.342                | -72.27              | Pk  | 39             | -21          | 10.7         | -43.57                  | -40             | -3.57       | H        |
| 10.604                | -73.19              | Pk  | 37.8           | -21          | 10.9         | -45.49                  | -40             | -5.49       | V        |
| 12.486                | -72.41              | Pk  | 39.1           | -20.2        | 10.6         | -42.91                  | -40             | -2.91       | V        |
| 6.254                 | -68.75              | Pk  | 35.7           | -26.4        | 11.2         | -48.25                  | -40             | -8.25       | H        |
| 6.257                 | -69.44              | Pk  | 35.7           | -26.4        | 11.4         | -48.74                  | -40             | -8.74       | V        |
| 8.859                 | -70.77              | Pk  | 36.2           | -23.7        | 11           | -47.27                  | -40             | -7.27       | H        |
| High Channel, 3690MHz |                     |     |                |              |              |                         |                 |             |          |
| 7.371                 | -73.58              | Pk  | 35.6           | -24.7        | 11.1         | -51.58                  | -40             | -11.58      | H        |
| 11.05                 | -75.32              | Pk  | 37.9           | -20.9        | 10.6         | -47.72                  | -40             | -7.72       | H        |
| 7.355                 | -73.56              | Pk  | 35.6           | -24.7        | 11           | -51.66                  | -40             | -11.66      | V        |
| 11.109                | -76.39              | Pk  | 37.9           | -21          | 11           | -48.49                  | -40             | -8.49       | V        |
| 14.722                | -75.8               | Pk  | 40             | -20.3        | 10.5         | -45.6                   | -40             | -5.6        | V        |
| 14.75                 | -76.44              | Pk  | 39.9           | -20.4        | 10.1         | -46.84                  | -40             | -6.84       | H        |

Pk - Peak detector

|                |                    |
|----------------|--------------------|
| Company:       |                    |
| Project #:     | 12607353           |
| Date:          | 5/21/2019          |
| Test Engineer: | 39006              |
| Configuration: | EUT Only           |
| Mode:          | LTE 48 16QAM 20MHz |
| Chamber #:     | Chamber A          |

| Frequency (GHz)       | Meter Reading (dBm) | Det | AF T346 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|-----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 3560MHz  |                     |     |                |              |              |                         |                 |             |          |
| 8.14                  | -72.37              | Pk  | 35.8           | -24          | 11           | -49.57                  | -40             | -9.57       | H        |
| 11.336                | -73.82              | Pk  | 38.1           | -20.3        | 10.8         | -45.22                  | -40             | -5.22       | H        |
| 8.072                 | -71.71              | Pk  | 35.8           | -24          | 11.4         | -48.51                  | -40             | -8.51       | V        |
| 10.86                 | -74.58              | Pk  | 37.9           | -20.5        | 11.2         | -45.98                  | -40             | -5.98       | V        |
| 6.321                 | -71.69              | Pk  | 35.6           | -26.3        | 10.9         | -51.49                  | -40             | -11.49      | H        |
| 6.389                 | -71                 | Pk  | 35.6           | -26.1        | 10.6         | -50.9                   | -40             | -10.9       | V        |
| Mid Channel, 3625MHz  |                     |     |                |              |              |                         |                 |             |          |
| 12.526                | -73.89              | Pk  | 39.1           | -20.7        | 10.6         | -44.89                  | -40             | -4.89       | H        |
| 12.526                | -75.41              | Pk  | 39.1           | -20.7        | 10.5         | -46.51                  | -40             | -6.51       | V        |
| 6.321                 | -72.49              | Pk  | 35.6           | -26.3        | 10.9         | -52.29                  | -40             | -12.29      | V        |
| 6.389                 | -70.95              | Pk  | 35.6           | -26.1        | 10.6         | -50.85                  | -40             | -10.85      | V        |
| 9.619                 | -73.5               | Pk  | 36.9           | -22.4        | 10.9         | -48.1                   | -40             | -8.1        | V        |
| 9.67                  | -73.05              | Pk  | 36.9           | -21.9        | 10.9         | -47.15                  | -40             | -7.15       | H        |
| High Channel, 3690MHz |                     |     |                |              |              |                         |                 |             |          |
| 7.384                 | -75.64              | Pk  | 35.6           | -24.5        | 10.9         | -53.64                  | -40             | -13.64      | H        |
| 11.055                | -75.19              | Pk  | 37.9           | -20.9        | 10.6         | -47.59                  | -40             | -7.59       | H        |
| 7.366                 | -75.59              | Pk  | 35.6           | -24.6        | 11.3         | -53.29                  | -40             | -13.29      | V        |
| 11.048                | -75.56              | Pk  | 37.9           | -20.9        | 11           | -47.56                  | -40             | -7.56       | V        |
| 14.744                | -75.85              | Pk  | 39.9           | -20.2        | 10.1         | -46.05                  | -40             | -6.05       | H        |
| 14.744                | -75.3               | Pk  | 39.9           | -20.2        | 10           | -45.6                   | -40             | -5.6        | V        |

Pk - Peak detector

### 9.3.7. LTE BAND 66

|                |                   |
|----------------|-------------------|
| Company:       |                   |
| Project #:     | 12607353          |
| Date:          | 4/13/2019         |
| Test Engineer: | 12501             |
| Configuration: | EUT Only          |
| Mode:          | LTE 66 QPSK 20MHz |
| Chamber #:     | Chamber B         |

| Frequency (GHz)       | Meter Reading (dBm) | Det | AF T344 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|-----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 1720MHz  |                     |     |                |              |              |                         |                 |             |          |
| 5.096                 | -67.61              | Pk  | 34.2           | -28.5        | 11.2         | -50.71                  | -13             | -37.71      | H        |
| 4.996                 | -68.75              | Pk  | 34.1           | -28.4        | 10.8         | -52.25                  | -13             | -39.25      | V        |
| 3.375                 | -67.34              | Pk  | 32.8           | -30.2        | 11.4         | -53.34                  | -13             | -40.34      | H        |
| 3.375                 | -67.74              | Pk  | 32.8           | -30.2        | 12           | -53.14                  | -13             | -40.14      | V        |
| 6.949                 | -70.41              | Pk  | 35.6           | -24.9        | 10.4         | -49.31                  | -13             | -36.31      | H        |
| 6.951                 | -71.11              | Pk  | 35.6           | -24.9        | 10.8         | -49.61                  | -13             | -36.61      | V        |
| Mid Channel, 1745MHz  |                     |     |                |              |              |                         |                 |             |          |
| 3.529                 | -67.49              | Pk  | 33             | -30.2        | 10.9         | -53.79                  | -13             | -40.79      | H        |
| 3.613                 | -66.59              | Pk  | 33.1           | -29.7        | 11           | -52.19                  | -13             | -39.19      | V        |
| 5.215                 | -67.48              | Pk  | 34.3           | -28.2        | 11.3         | -50.08                  | -13             | -37.08      | H        |
| 5.218                 | -68.51              | Pk  | 34.3           | -28.2        | 11.2         | -51.21                  | -13             | -38.21      | V        |
| 6.932                 | -70.4               | Pk  | 35.6           | -25.1        | 11.2         | -48.7                   | -13             | -35.70      | V        |
| 7.016                 | -70.76              | Pk  | 35.6           | -25          | 10.3         | -49.86                  | -13             | -36.86      | H        |
| High Channel, 1770MHz |                     |     |                |              |              |                         |                 |             |          |
| 3.635                 | -67.13              | Pk  | 33.1           | -29.5        | 10.9         | -52.63                  | -13             | -39.63      | H        |
| 3.721                 | -66.39              | Pk  | 33.3           | -30          | 11.3         | -51.79                  | -13             | -38.79      | V        |
| 5.284                 | -69.01              | Pk  | 34.4           | -27.9        | 11           | -51.51                  | -13             | -38.51      | V        |
| 5.302                 | -69.03              | Pk  | 34.4           | -27.8        | 10.9         | -51.53                  | -13             | -38.53      | H        |
| 7.016                 | -70.65              | Pk  | 35.6           | -25          | 10.3         | -49.75                  | -13             | -36.75      | H        |
| 7.069                 | -70.21              | Pk  | 35.6           | -24.8        | 10.9         | -48.51                  | -13             | -35.51      | V        |

Pk - Peak detector

|                |                    |
|----------------|--------------------|
| Company:       |                    |
| Project #:     | 12607353           |
| Date:          | 4/13/2019          |
| Test Engineer: | 12501              |
| Configuration: | EUT Only           |
| Mode:          | LTE 66 16QAM 20MHz |
| Chamber #:     | Chamber B          |

| Frequency (GHz)       | Meter Reading (dBm) | Det | AF T344 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|-----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 1720MHz  |                     |     |                |              |              |                         |                 |             |          |
| 5.096                 | -67.61              | Pk  | 34.2           | -28.5        | 11.2         | -50.71                  | -13             | -37.71      | H        |
| 4.996                 | -68.75              | Pk  | 34.1           | -28.4        | 10.8         | -52.25                  | -13             | -39.25      | V        |
| 3.375                 | -67.34              | Pk  | 32.8           | -30.2        | 11.4         | -53.34                  | -13             | -40.34      | H        |
| 3.375                 | -67.74              | Pk  | 32.8           | -30.2        | 12           | -53.14                  | -13             | -40.14      | V        |
| 6.949                 | -70.41              | Pk  | 35.6           | -24.9        | 10.4         | -49.31                  | -13             | -36.31      | H        |
| 6.951                 | -71.11              | Pk  | 35.6           | -24.9        | 10.8         | -49.61                  | -13             | -36.61      | V        |
| Mid Channel, 1745MHz  |                     |     |                |              |              |                         |                 |             |          |
| 3.529                 | -67.49              | Pk  | 33             | -30.2        | 10.9         | -53.79                  | -13             | -40.79      | H        |
| 3.613                 | -66.59              | Pk  | 33.1           | -29.7        | 11           | -52.19                  | -13             | -39.19      | V        |
| 5.215                 | -67.48              | Pk  | 34.3           | -28.2        | 11.3         | -50.08                  | -13             | -37.08      | H        |
| 5.218                 | -68.51              | Pk  | 34.3           | -28.2        | 11.2         | -51.21                  | -13             | -38.21      | V        |
| 6.932                 | -70.4               | Pk  | 35.6           | -25.1        | 11.2         | -48.7                   | -13             | -35.70      | V        |
| 7.016                 | -70.76              | Pk  | 35.6           | -25          | 10.3         | -49.86                  | -13             | -36.86      | H        |
| High Channel, 1770MHz |                     |     |                |              |              |                         |                 |             |          |
| 3.635                 | -67.13              | Pk  | 33.1           | -29.5        | 10.9         | -52.63                  | -13             | -39.63      | H        |
| 3.721                 | -66.39              | Pk  | 33.3           | -30          | 11.3         | -51.79                  | -13             | -38.79      | V        |
| 5.284                 | -69.01              | Pk  | 34.4           | -27.9        | 11           | -51.51                  | -13             | -38.51      | V        |
| 5.302                 | -69.03              | Pk  | 34.4           | -27.8        | 10.9         | -51.53                  | -13             | -38.53      | H        |
| 7.016                 | -70.65              | Pk  | 35.6           | -25          | 10.3         | -49.75                  | -13             | -36.75      | H        |
| 7.069                 | -70.21              | Pk  | 35.6           | -24.8        | 10.9         | -48.51                  | -13             | -35.51      | V        |

Pk - Peak detector

## 9.4. FIELD STRENGTH OF SPURIOUS RADIATION, ANT 4

### 9.4.1. LTE BAND 2

|                |                  |
|----------------|------------------|
| Company:       |                  |
| Project #:     | 12607353         |
| Date:          | 5/15/2019        |
| Test Engineer: | 31300            |
| Configuration: | EUT Only         |
| Mode:          | LTE 2 QPSK 20MHz |
| Chamber #:     | Chamber A        |

| Frequency (GHz)      | Meter Reading (dBm) | Det | AF T346 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 1860MHz |                     |     |                |              |              |                         |                 |             |          |
| 3.88                 | -65.81              | Pk  | 33.4           | -29.4        | 11.4         | -50.41                  | -13             | -37.41      | H        |
| 7.629                | -69.88              | Pk  | 35.6           | -24.4        | 10.7         | -47.98                  | -13             | -34.98      | H        |
| 9.116                | -70.78              | Pk  | 36.2           | -23.2        | 11           | -46.78                  | -13             | -33.78      | H        |
| 3.869                | -66.39              | Pk  | 33.4           | -29.4        | 11.6         | -50.79                  | -13             | -37.79      | V        |
| 4.365                | -66.77              | Pk  | 33.6           | -28.5        | 11.2         | -50.47                  | -13             | -37.47      | V        |
| 10.368               | -71.97              | Pk  | 37.6           | -21.2        | 10.4         | -45.17                  | -13             | -32.17      | V        |
| Mid Channel, 1880MHz |                     |     |                |              |              |                         |                 |             |          |
| 3.639                | -65.76              | Pk  | 33.1           | -29.6        | 11           | -51.26                  | -13             | -38.26      | H        |
| 7.257                | -69                 | Pk  | 35.5           | -25          | 10.6         | -47.9                   | -13             | -34.90      | H        |
| 3.874                | -65.92              | Pk  | 33.4           | -29.5        | 12.2         | -49.82                  | -13             | -36.82      | V        |
| 7.267                | -70.29              | Pk  | 35.6           | -25          | 11           | -48.69                  | -13             | -35.69      | V        |
| 5.583                | -66.5               | Pk  | 34.9           | -28.1        | 10.7         | -49                     | -13             | -36.00      | H        |
| 5.831                | -69.08              | Pk  | 34.8           | -27.2        | 10.9         | -50.58                  | -13             | -37.58      | V        |
| HighChannel, 1900MHz |                     |     |                |              |              |                         |                 |             |          |
| 3.715                | -66.24              | Pk  | 32.8           | -29.9        | 10.8         | -52.54                  | -13             | -39.54      | H        |
| 3.628                | -67.14              | Pk  | 33.1           | -29.7        | 11.3         | -52.44                  | -13             | -39.44      | V        |
| 5.658                | -68.56              | Pk  | 34.9           | -27.9        | 10.8         | -50.76                  | -13             | -37.76      | H        |
| 6.386                | -69.4               | Pk  | 35.4           | -26.2        | 10.7         | -49.5                   | -13             | -36.50      | H        |
| 6.495                | -69.45              | Pk  | 35.6           | -26.1        | 11.3         | -48.65                  | -13             | -35.65      | V        |
| 9.693                | -70.78              | Pk  | 36.9           | -22.2        | 11           | -45.08                  | -13             | -32.08      | V        |

Pk - Peak detector

|                |                   |
|----------------|-------------------|
| Company:       |                   |
| Project #:     | 12607353          |
| Date:          | 5/15/2019         |
| Test Engineer: | 31300             |
| Configuration: | EUT Only          |
| Mode:          | LTE 2 16QAM 20MHz |
| Chamber #:     | Chamber A         |

| Frequency (GHz)      | Meter Reading (dBm) | Det | AF T346 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 1860MHz |                     |     |                |              |              |                         |                 |             |          |
| 4.851                | -66.76              | Pk  | 34.1           | -28.6        | 11.2         | -50.06                  | -13             | -37.06      | H        |
| 7.476                | -70.24              | Pk  | 35.6           | -24.6        | 10.6         | -48.64                  | -13             | -35.64      | H        |
| 15.575               | -71.22              | Pk  | 40.5           | -20.7        | 11.1         | -40.32                  | -13             | -27.32      | H        |
| 3.927                | -66.02              | Pk  | 33.4           | -29.6        | 11.5         | -50.72                  | -13             | -37.72      | V        |
| 5.061                | -66.32              | Pk  | 34.2           | -28.8        | 11           | -49.92                  | -13             | -36.92      | V        |
| 5.068                | -66.05              | Pk  | 34.1           | -28.7        | 10.7         | -49.95                  | -13             | -36.95      | V        |
| Mid Channel, 1880MHz |                     |     |                |              |              |                         |                 |             |          |
| 4.363                | -66.27              | Pk  | 33.6           | -28.5        | 11.2         | -49.97                  | -13             | -36.97      | H        |
| 11.219               | -72.24              | Pk  | 38             | -21          | 11           | -44.24                  | -13             | -31.24      | V        |
| 2.636                | -66.09              | Pk  | 32.8           | -31          | 12.9         | -51.39                  | -13             | -38.39      | V        |
| 3.413                | -66.73              | Pk  | 32.8           | -30.2        | 11.7         | -52.43                  | -13             | -39.43      | H        |
| 5.169                | -67.03              | Pk  | 34.2           | -28.5        | 11.6         | -49.73                  | -13             | -36.73      | V        |
| 13.674               | -71.04              | Pk  | 38.7           | -20.6        | 11           | -41.94                  | -13             | -28.94      | H        |
| HighChannel, 1900MHz |                     |     |                |              |              |                         |                 |             |          |
| 3.876                | -65.02              | Pk  | 33.4           | -29.5        | 12           | -49.12                  | -13             | -36.12      | H        |
| 11.712               | -72.25              | Pk  | 38.5           | -21          | 10.7         | -44.05                  | -13             | -31.05      | H        |
| 3.819                | -65.59              | Pk  | 33.4           | -29.5        | 11.4         | -50.29                  | -13             | -37.29      | V        |
| 7.683                | -70.83              | Pk  | 35.6           | -24.5        | 11.4         | -48.33                  | -13             | -35.33      | V        |
| 12.427               | -72.6               | Pk  | 38.9           | -20.7        | 10.5         | -43.9                   | -13             | -30.90      | V        |
| 6.463                | -69.57              | Pk  | 35.6           | -25.8        | 10.5         | -49.27                  | -13             | -36.27      | H        |

Pk - Peak detector

## 9.4.2. LTE BAND 7

|                |                  |
|----------------|------------------|
| Company:       |                  |
| Project #:     | 12607353         |
| Date:          | 5/19/2019        |
| Test Engineer: | 39006            |
| Configuration: | EUT Only         |
| Mode:          | LTE 7 QPSK 20MHz |
| Chamber #:     | Chamber A        |

| Frequency (GHz)       | Meter Reading (dBm) | Det | AF T346 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|-----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 2510MHz  |                     |     |                |              |              |                         |                 |             |          |
| 7.694                 | -70.03              | Pk  | 35.6           | -24.5        | 11.1         | -47.83                  | -25             | -22.83      | H        |
| 3.815                 | -66.51              | Pk  | 33.4           | -29.5        | 11.2         | -51.41                  | -25             | -26.41      | V        |
| 7.603                 | -70.72              | Pk  | 35.5           | -24.4        | 11.1         | -48.52                  | -25             | -23.52      | V        |
| 10.079                | -72.91              | Pk  | 36.9           | -22          | 10.3         | -47.71                  | -25             | -22.71      | V        |
| 14.22                 | -72.15              | Pk  | 39             | -20.7        | 11.3         | -42.55                  | -25             | -17.55      | H        |
| 14.223                | -71.16              | Pk  | 39             | -20.8        | 11.1         | -41.86                  | -25             | -16.86      | V        |
| Mid Channel, 2535MHz  |                     |     |                |              |              |                         |                 |             |          |
| 3.929                 | -66.18              | Pk  | 33.4           | -29.6        | 11.5         | -50.88                  | -25             | -25.88      | H        |
| 10.972                | -71.53              | Pk  | 37.9           | -21          | 10.7         | -43.93                  | -25             | -18.93      | H        |
| 3.874                 | -66.16              | Pk  | 33.4           | -29.5        | 12.2         | -50.06                  | -25             | -25.06      | V        |
| 10.848                | -72.19              | Pk  | 38             | -20.2        | 10.9         | -43.49                  | -25             | -18.49      | V        |
| 6.512                 | -69.37              | Pk  | 35.6           | -26.1        | 11.3         | -48.57                  | -25             | -23.57      | V        |
| 6.514                 | -69.11              | Pk  | 35.6           | -26.1        | 10.9         | -48.71                  | -25             | -23.71      | H        |
| High Channel, 2560MHz |                     |     |                |              |              |                         |                 |             |          |
| 3.867                 | -66.09              | Pk  | 33.4           | -29.4        | 11.4         | -50.69                  | -25             | -25.69      | H        |
| 3.827                 | -65.2               | Pk  | 33.4           | -29.1        | 11.1         | -49.8                   | -25             | -24.80      | V        |
| 6.423                 | -68.68              | Pk  | 35.5           | -26.1        | 10.3         | -48.98                  | -25             | -23.98      | H        |
| 6.493                 | -69.62              | Pk  | 35.6           | -26.1        | 11.3         | -48.82                  | -25             | -23.82      | V        |
| 9.761                 | -71.27              | Pk  | 36.9           | -22.7        | 10.9         | -46.17                  | -25             | -21.17      | V        |
| 9.875                 | -71.4               | Pk  | 36.9           | -22.1        | 10.7         | -45.9                   | -25             | -20.90      | H        |

Pk - Peak detector

|                |                   |
|----------------|-------------------|
| Company:       |                   |
| Project #:     | 12607353          |
| Date:          | 5/19/2019         |
| Test Engineer: | 39006             |
| Configuration: | EUT Only          |
| Mode:          | LTE 7 16QAM 20MHz |
| Chamber #:     | Chamber A         |

| Frequency (GHz)      | Meter Reading (dBm) | Det | AF T346 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 2510MHz |                     |     |                |              |              |                         |                 |             |          |
| 3.816                | -66.67              | Pk  | 33.4           | -29.5        | 11.6         | -51.17                  | -25             | -26.17      | H        |
| 3.868                | -65.61              | Pk  | 33.4           | -29.4        | 11.5         | -50.11                  | -25             | -25.11      | V        |
| 6.503                | -69.87              | Pk  | 35.6           | -26          | 11.4         | -48.87                  | -25             | -23.87      | V        |
| 6.505                | -69.04              | Pk  | 35.6           | -26          | 10.9         | -48.54                  | -25             | -23.54      | H        |
| 10.079               | -72.91              | Pk  | 36.9           | -22          | 10.3         | -47.71                  | -25             | -22.71      | V        |
| 12.707               | -72.65              | Pk  | 38.9           | -21.1        | 10.8         | -44.05                  | -25             | -19.05      | H        |
| Mid Channel, 2535MHz |                     |     |                |              |              |                         |                 |             |          |
| 3.842                | -66                 | Pk  | 33.4           | -29.6        | 11.1         | -51.1                   | -25             | -26.10      | H        |
| 11.589               | -72.08              | Pk  | 38.3           | -20.9        | 11           | -43.68                  | -25             | -18.68      | H        |
| 3.858                | -66.34              | Pk  | 33.5           | -29.6        | 11.4         | -51.04                  | -25             | -26.04      | V        |
| 11.675               | -72.27              | Pk  | 38.5           | -20.9        | 10.7         | -43.97                  | -25             | -18.97      | V        |
| 7.057                | -70.18              | Pk  | 35.5           | -25          | 10.6         | -49.08                  | -25             | -24.08      | H        |
| 7.232                | -69.14              | Pk  | 35.6           | -25.1        | 11.1         | -47.54                  | -25             | -22.54      | V        |
| Mid Channel, 2560MHz |                     |     |                |              |              |                         |                 |             |          |
| 3.877                | -65.7               | Pk  | 33.4           | -29.4        | 11.8         | -49.9                   | -25             | -24.90      | H        |
| 3.879                | -75.08              | Av  | 33.4           | -29.4        | 11.9         | -59.18                  | -25             | -34.18      | V        |
| 6.519                | -69.5               | Pk  | 35.6           | -25.9        | 10.8         | -49                     | -25             | -24.00      | H        |
| 6.541                | -69.77              | Pk  | 35.7           | -26          | 10.7         | -49.37                  | -25             | -24.37      | V        |
| 9.697                | -71.34              | Pk  | 36.8           | -22.4        | 10.9         | -46.04                  | -25             | -21.04      | V        |
| 9.748                | -71.64              | Pk  | 36.9           | -22.5        | 10.8         | -46.44                  | -25             | -21.44      | H        |

Pk - Peak detector

### 9.4.3. LTE BAND 25

|                |                   |
|----------------|-------------------|
| Company:       |                   |
| Project #:     | 12607353          |
| Date:          | 5/16/2019         |
| Test Engineer: | 31300             |
| Configuration: | EUT Only          |
| Mode:          | LTE 25 QPSK 20MHz |
| Chamber #:     | Chamber A         |

| Frequency (GHz)        | Meter Reading (dBm) | Det | AF T346 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|------------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 1860MHz   |                     |     |                |              |              |                         |                 |             |          |
| 8.356                  | -70.04              | Pk  | 35.8           | -24.2        | 11.4         | -47.04                  | -13             | -34.04      | H        |
| 3.882                  | -66.66              | Pk  | 33.4           | -29.4        | 11.6         | -51.06                  | -13             | -38.06      | V        |
| 3.05                   | -66.28              | Pk  | 33             | -30.7        | 12           | -51.98                  | -13             | -38.98      | H        |
| 6.375                  | -68.34              | Pk  | 35.4           | -26.3        | 11.1         | -48.14                  | -13             | -35.14      | V        |
| 10.595                 | -71.49              | Pk  | 37.8           | -21.1        | 10.7         | -44.09                  | -13             | -31.09      | V        |
| 13.619                 | -71.32              | Pk  | 38.7           | -20.8        | 11.2         | -42.22                  | -13             | -29.22      | H        |
| Mid Channel, 1882.5MHz |                     |     |                |              |              |                         |                 |             |          |
| 4.841                  | -67.59              | Pk  | 34.2           | -28.7        | 10.9         | -51.19                  | -13             | -38.19      | V        |
| 11.046                 | -71.33              | Pk  | 37.9           | -21          | 11           | -43.43                  | -13             | -30.43      | V        |
| 4.428                  | -66.57              | Pk  | 33.5           | -29.2        | 11.6         | -50.67                  | -13             | -37.67      | H        |
| 6.492                  | -69.48              | Pk  | 35.6           | -26.1        | 10.7         | -49.28                  | -13             | -36.28      | H        |
| 8.715                  | -70.81              | Pk  | 35.8           | -23.6        | 11.3         | -47.31                  | -13             | -34.31      | V        |
| 13.625                 | -71                 | Pk  | 38.7           | -20.9        | 11.2         | -42                     | -13             | -29.00      | H        |
| High Channel, 1905MHz  |                     |     |                |              |              |                         |                 |             |          |
| 4.84                   | -67.29              | Pk  | 34.2           | -28.7        | 10.8         | -50.99                  | -13             | -37.99      | V        |
| 11.966                 | -71.98              | Pk  | 38.8           | -21          | 10.5         | -43.68                  | -13             | -30.68      | V        |
| 2.473                  | -68.05              | Pk  | 32.7           | -31.5        | 11.8         | -55.05                  | -13             | -42.05      | H        |
| 6.211                  | -69.37              | Pk  | 35.3           | -26.5        | 10.7         | -49.87                  | -13             | -36.87      | H        |
| 7.953                  | -69.63              | Pk  | 35.7           | -24.1        | 11.1         | -46.93                  | -13             | -33.93      | V        |
| 13.605                 | -70.29              | Pk  | 38.7           | -20.5        | 10.7         | -41.39                  | -13             | -28.39      | H        |

Pk - Peak detector

|                |                    |
|----------------|--------------------|
| Company:       |                    |
| Project #:     | 12607353           |
| Date:          | 5/16/2019          |
| Test Engineer: | 31300              |
| Configuration: | EUT Only           |
| Mode:          | LTE 25 16QAM 20MHz |
| Chamber #:     | Chamber A          |

| Frequency (GHz)        | Meter Reading (dBm) | Det | AF T346 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Height (cm) | Polarity |
|------------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 1860MHz   |                     |     |                |              |              |                         |                 |             |          |
| 5.148                  | -67.48              | Pk  | 34.2           | -28.6        | 11           | -50.88                  | -13             | -37.88      | H        |
| 10.913                 | -72.31              | Pk  | 37.9           | -20.6        | 10.8         | -44.21                  | -13             | -31.21      | V        |
| 5.51                   | -68.87              | Pk  | 34.6           | -28.1        | 11.1         | -51.27                  | -13             | -38.27      | V        |
| 9.667                  | -71.66              | Pk  | 36.8           | -22          | 10.9         | -45.96                  | -13             | -32.96      | H        |
| 13.853                 | -71.97              | Pk  | 38.6           | -21          | 11           | -43.37                  | -13             | -30.37      | H        |
| 14.333                 | -71.51              | Pk  | 39.3           | -20.2        | 10.9         | -41.51                  | -13             | -28.51      | V        |
| Mid Channel, 1882.5MHz |                     |     |                |              |              |                         |                 |             |          |
| 15.627                 | -70.95              | Pk  | 40.4           | -20.5        | 11.1         | -39.95                  | -13             | -26.95      | H        |
| 2.926                  | -67.07              | Pk  | 32.5           | -30.7        | 11.9         | -53.37                  | -13             | -40.37      | V        |
| 5.941                  | -68.07              | Pk  | 35             | -27.2        | 10.9         | -49.37                  | -13             | -36.37      | H        |
| 7.247                  | -70.17              | Pk  | 35.5           | -24.9        | 11.2         | -48.37                  | -13             | -35.37      | V        |
| 9.818                  | -70.32              | Pk  | 37             | -22.3        | 10.8         | -44.82                  | -13             | -31.82      | H        |
| 14.304                 | -71.65              | Pk  | 39.3           | -20.3        | 11.1         | -41.55                  | -13             | -28.55      | V        |
| High Channel, 1905MHz  |                     |     |                |              |              |                         |                 |             |          |
| 3.879                  | -66.35              | Pk  | 33.4           | -29.4        | 11.7         | -50.65                  | -13             | -37.65      | H        |
| 4.858                  | -67.34              | Pk  | 34.1           | -28.6        | 11.4         | -50.44                  | -13             | -37.44      | H        |
| 3.876                  | -65.94              | Pk  | 33.4           | -29.5        | 12.2         | -49.84                  | -13             | -36.84      | V        |
| 5.088                  | -67.02              | Pk  | 34.2           | -28.5        | 11.2         | -50.12                  | -13             | -37.12      | V        |
| 7.801                  | -70.66              | Pk  | 35.6           | -24.4        | 11.4         | -48.06                  | -13             | -35.06      | H        |
| 13.606                 | -70.22              | Pk  | 38.7           | -20.5        | 10.3         | -41.72                  | -13             | -28.72      | V        |

Pk - Peak detector

#### 9.4.4. LTE BAND 30

|                |                   |
|----------------|-------------------|
| Project #:     | 12607353          |
| Date:          | 5/21/2019         |
| Test Engineer: | 39006             |
| Configuration: | EUT Only          |
| Mode:          | LTE 30 QPSK 10MHz |
| Chamber #:     | Chamber A         |

| Frequency (GHz)      | Meter Reading (dBm) | Det | AF T346 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Mid Channel, 2310MHz |                     |     |                |              |              |                         |                 |             |          |
| 9.194                | -71.5               | Pk  | 36.1           | -22.7        | 11           | -47.1                   | -40             | -7.10       | V        |
| 4.44                 | -67                 | Pk  | 33.5           | -29          | 11.6         | -50.9                   | -40             | -10.90      | H        |
| 4.44                 | -66.66              | Pk  | 33.5           | -29          | 11.5         | -50.66                  | -40             | -10.66      | V        |
| 6.931                | -70.03              | Pk  | 35.6           | -25.1        | 10.7         | -48.83                  | -40             | -8.83       | H        |
| 6.94                 | -70.38              | Pk  | 35.6           | -25          | 11.4         | -48.38                  | -40             | -8.38       | V        |
| 9.212                | -72.11              | Pk  | 36.1           | -22.9        | 11           | -47.91                  | -40             | -7.91       | H        |

|                |                    |
|----------------|--------------------|
| Project #:     | 12607353           |
| Date:          | 5/21/2019          |
| Test Engineer: | 39006              |
| Configuration: | EUT Only           |
| Mode:          | LTE 30 16QAM 10MHz |
| Chamber #:     | Chamber A          |

| Frequency (GHz)      | Meter Reading (dBm) | Det | AF T346 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Mid Channel, 2310MHz |                     |     |                |              |              |                         |                 |             |          |
| 4.57                 | -68.34              | Pk  | 33.9           | -28.7        | 10.3         | -52.84                  | -40             | -12.84      | H        |
| 4.561                | -68.32              | Pk  | 33.9           | -28.8        | 10.7         | -52.52                  | -40             | -12.52      | V        |
| 6.501                | -71.98              | Pk  | 35.6           | -26          | 10.9         | -51.48                  | -40             | -11.48      | H        |
| 6.517                | -71.78              | Pk  | 35.6           | -26          | 11.3         | -50.88                  | -40             | -10.88      | V        |
| 9.29                 | -71.85              | Pk  | 36.3           | -23.2        | 11           | -47.75                  | -40             | -7.75       | H        |
| 9.293                | -73.79              | Pk  | 36.3           | -23.2        | 11           | -49.69                  | -40             | -9.69       | V        |

Pk - Peak detector

### 9.4.5. LTE BAND 41

|                |                   |
|----------------|-------------------|
| Company:       |                   |
| Project #:     | 12607353          |
| Date:          | 5/20/2019         |
| Test Engineer: | 31300             |
| Configuration: | EUT Only          |
| Mode:          | LTE 41 QPSK 20MHz |
| Chamber #:     | Chamber A         |

| Frequency (GHz)       | Meter Reading (dBm) | Det | AF T346 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|-----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 2506MHz  |                     |     |                |              |              |                         |                 |             |          |
| 7.491                 | -63.99              | Pk  | 35.7           | -24.6        | 10.8         | -42.09                  | -25             | -17.09      | H        |
| 3.884                 | -66.13              | Pk  | 33.4           | -29.4        | 11.3         | -50.83                  | -25             | -25.83      | V        |
| 7.491                 | -59.17              | Pk  | 35.7           | -24.6        | 11           | -37.07                  | -25             | -12.07      | V        |
| 11.071                | -71.95              | Pk  | 37.9           | -20.9        | 10.6         | -44.35                  | -25             | -19.35      | V        |
| 3.426                 | -67.67              | Pk  | 32.8           | -30.1        | 12.1         | -52.87                  | -25             | -27.87      | H        |
| 14.526                | -71.3               | Pk  | 39.8           | -21.2        | 11           | -41.7                   | -25             | -16.70      | H        |
| Mid Channel, 2593MHz  |                     |     |                |              |              |                         |                 |             |          |
| 10.925                | -71.99              | Pk  | 37.9           | -20.9        | 11.1         | -43.89                  | -25             | -18.89      | V        |
| 5.172                 | -67.91              | Pk  | 34.2           | -28.5        | 11.6         | -50.61                  | -25             | -25.61      | H        |
| 5.765                 | -69.51              | Pk  | 34.7           | -27.5        | 10.5         | -51.81                  | -25             | -26.81      | V        |
| 7.752                 | -63.75              | Pk  | 35.7           | -24.4        | 11.1         | -41.35                  | -25             | -16.35      | H        |
| 7.752                 | -59.79              | Pk  | 35.7           | -24.4        | 11.2         | -37.29                  | -25             | -12.29      | V        |
| 13.676                | -70.83              | Pk  | 38.7           | -20.7        | 11           | -41.83                  | -25             | -16.83      | H        |
| High Channel, 2680MHz |                     |     |                |              |              |                         |                 |             |          |
| 3.874                 | -66.45              | Pk  | 33.4           | -29.5        | 12           | -50.55                  | -25             | -25.55      | H        |
| 3.805                 | -66.21              | Pk  | 33.4           | -29.4        | 11.4         | -50.81                  | -25             | -25.81      | V        |
| 7.959                 | -70.2               | Pk  | 35.7           | -24.2        | 11.1         | -47.6                   | -25             | -22.6       | V        |
| 9.663                 | -71.27              | Pk  | 36.8           | -22.2        | 10.9         | -45.77                  | -25             | -20.77      | H        |
| 13.626                | -71.17              | Pk  | 38.8           | -20.9        | 11.2         | -42.07                  | -25             | -17.07      | H        |
| 13.627                | -70.69              | Pk  | 38.7           | -20.9        | 10.8         | -42.09                  | -25             | -17.09      | V        |

Pk - Peak detector

|                |                    |
|----------------|--------------------|
| Company:       |                    |
| Project #:     | 12607353           |
| Date:          | 5/20/2019          |
| Test Engineer: | 31300              |
| Configuration: | EUT Only           |
| Mode:          | LTE 41 16QAM 20MHz |
| Chamber #:     | Chamber A          |

| Frequency (GHz)       | Meter Reading (dBm) | Det | AF T346 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|-----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 2506MHz  |                     |     |                |              |              |                         |                 |             |          |
| 3.877                 | -65.46              | Pk  | 33.4           | -29.4        | 11.9         | -49.56                  | -25             | -24.56      | H        |
| 4.856                 | -67.78              | Pk  | 34.1           | -28.6        | 11.4         | -50.88                  | -25             | -25.88      | H        |
| 3.869                 | -65.32              | Pk  | 33.4           | -29.4        | 11.5         | -49.82                  | -25             | -24.82      | V        |
| 7.491                 | -58.94              | Pk  | 35.7           | -24.6        | 11           | -36.84                  | -25             | -11.84      | V        |
| 6.623                 | -68.79              | Pk  | 35.6           | -26.2        | 10.6         | -48.79                  | -25             | -23.79      | H        |
| 9.671                 | -70.73              | Pk  | 36.8           | -21.9        | 11           | -44.83                  | -25             | -19.83      | V        |
| Mid Channel, 2593MHz  |                     |     |                |              |              |                         |                 |             |          |
| 3.864                 | -66.19              | Pk  | 33.4           | -29.5        | 11.5         | -50.79                  | -25             | -25.79      | H        |
| 5.052                 | -67.74              | Pk  | 34.1           | -28.5        | 11.2         | -50.94                  | -25             | -25.94      | V        |
| 5.841                 | -69                 | Pk  | 34.9           | -27.3        | 10.5         | -50.9                   | -25             | -25.90      | H        |
| 7.752                 | -64.76              | Pk  | 35.7           | -24.4        | 11.1         | -42.36                  | -25             | -17.36      | H        |
| 7.752                 | -60.43              | Pk  | 35.7           | -24.4        | 11.2         | -37.93                  | -25             | -12.93      | V        |
| 9.763                 | -71.58              | Pk  | 36.9           | -22.7        | 10.9         | -46.48                  | -25             | -21.48      | V        |
| High Channel, 2680MHz |                     |     |                |              |              |                         |                 |             |          |
| 3.88                  | -66.66              | Pk  | 33.4           | -29.4        | 11.5         | -51.16                  | -25             | -26.16      | H        |
| 4.31                  | -67.01              | Pk  | 33.5           | -28.8        | 11.6         | -50.71                  | -25             | -25.71      | V        |
| 10.849                | -72.41              | Pk  | 38             | -20.2        | 11           | -43.61                  | -25             | -18.61      | V        |
| 5.293                 | -68.33              | Pk  | 34.4           | -27.9        | 11.2         | -50.63                  | -25             | -25.63      | V        |
| 6.196                 | -70.14              | Pk  | 35.3           | -26.7        | 11           | -50.54                  | -25             | -25.54      | H        |
| 14.51                 | -71.68              | Pk  | 39.8           | -21.1        | 10.7         | -42.28                  | -25             | -17.28      | H        |

Pk - Peak detector

### 9.4.6. LTE BAND 48

|                |                   |
|----------------|-------------------|
| Company:       |                   |
| Project #:     | 12607353          |
| Date:          | 5/21/2019         |
| Test Engineer: | 12501             |
| Configuration: | EUT Only          |
| Mode:          | LTE 48 QPSK 20MHz |
| Chamber #:     | Chamber A         |

| Frequency (GHz)       | Meter Reading (dBm) | Det | AF T346 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|-----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 3560MHz  |                     |     |                |              |              |                         |                 |             |          |
| 10.66                 | -76.89              | Pk  | 38             | -21          | 10.5         | -49.39                  | -40             | -9.39       | H        |
| 10.639                | -76.26              | Pk  | 37.9           | -21.2        | 10.3         | -49.26                  | -40             | -9.26       | V        |
| 7.122                 | -73                 | Pk  | 35.6           | -25.2        | 10.8         | -51.8                   | -40             | -11.8       | V        |
| 7.124                 | -73.88              | Pk  | 35.6           | -25.2        | 10.7         | -52.78                  | -40             | -12.78      | H        |
| 14.228                | -73.81              | Pk  | 39.1           | -20.7        | 11.1         | -44.31                  | -40             | -4.31       | H        |
| 14.246                | -75.12              | Pk  | 39.1           | -20.5        | 10.8         | -45.72                  | -40             | -5.72       | V        |
| Mid Channel, 3625MHz  |                     |     |                |              |              |                         |                 |             |          |
| 10.86                 | -75.34              | Pk  | 37.9           | -20.5        | 10.9         | -47.04                  | -40             | -7.04       | H        |
| 14.492                | -75.8               | Pk  | 39.7           | -20.8        | 10.8         | -46.1                   | -40             | -6.1        | H        |
| 10.845                | -75.7               | Pk  | 38             | -20.2        | 10.8         | -47.1                   | -40             | -7.1        | V        |
| 14.5                  | -75.07              | Pk  | 39.8           | -20.9        | 10.3         | -45.87                  | -40             | -5.87       | V        |
| 7.206                 | -74                 | Pk  | 35.5           | -25.1        | 10.8         | -52.8                   | -40             | -12.8       | V        |
| 7.23                  | -73.73              | Pk  | 35.6           | -25.1        | 10.6         | -52.63                  | -40             | -12.63      | H        |
| High Channel, 3690MHz |                     |     |                |              |              |                         |                 |             |          |
| 7.378                 | -75.6               | Pk  | 35.6           | -24.4        | 10.9         | -53.5                   | -40             | -13.5       | H        |
| 11.051                | -74.92              | Pk  | 37.9           | -20.9        | 10.6         | -47.32                  | -40             | -7.32       | H        |
| 7.38                  | -75.25              | Pk  | 35.6           | -24.4        | 11.3         | -52.75                  | -40             | -12.75      | V        |
| 11.034                | -75.95              | Pk  | 37.9           | -21          | 10.8         | -48.25                  | -40             | -8.25       | V        |
| 14.719                | -75.5               | Pk  | 40             | -20.3        | 10.5         | -45.3                   | -40             | -5.3        | V        |
| 14.749                | -76.33              | Pk  | 39.9           | -20.3        | 10.1         | -46.63                  | -40             | -6.63       | H        |

Pk - Peak detector

|                |                    |
|----------------|--------------------|
| Company:       |                    |
| Project #:     | 12607353           |
| Date:          | 5/21/2019          |
| Test Engineer: | 12501              |
| Configuration: | EUT Only           |
| Mode:          | LTE 48 16QAM 20MHz |
| Chamber #:     | Chamber A          |

| Frequency (GHz)       | Meter Reading (dBm) | Det | AF T346 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|-----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 3560MHz  |                     |     |                |              |              |                         |                 |             |          |
| 10.664                | -76.11              | Pk  | 37.9           | -21.1        | 10.5         | -48.81                  | -40             | -8.81       | H        |
| 10.644                | -76.12              | Pk  | 37.9           | -21.2        | 10.4         | -49.02                  | -40             | -9.02       | V        |
| 7.098                 | -74.6               | Pk  | 35.5           | -25.3        | 10.3         | -54.1                   | -40             | -14.1       | V        |
| 7.12                  | -74.1               | Pk  | 35.6           | -25.2        | 10.5         | -53.2                   | -40             | -13.2       | H        |
| 14.203                | -76.31              | Pk  | 39             | -21.1        | 11.2         | -47.21                  | -40             | -7.21       | V        |
| 14.227                | -75.27              | Pk  | 39.1           | -20.7        | 11.1         | -45.77                  | -40             | -5.77       | H        |
| Mid Channel, 3625MHz  |                     |     |                |              |              |                         |                 |             |          |
| 10.868                | -76.34              | Pk  | 38             | -20.8        | 10.8         | -48.34                  | -40             | -8.34       | H        |
| 14.499                | -74.32              | Pk  | 39.8           | -20.9        | 10.5         | -44.92                  | -40             | -4.92       | H        |
| 10.786                | -75.51              | Pk  | 37.9           | -20.5        | 11.2         | -46.91                  | -40             | -6.91       | V        |
| 7.172                 | -73.83              | Pk  | 35.5           | -25.1        | 10.7         | -52.73                  | -40             | -12.73      | V        |
| 7.226                 | -73.49              | Pk  | 35.5           | -25.1        | 10.4         | -52.69                  | -40             | -12.69      | H        |
| 14.424                | -75.67              | Pk  | 39.6           | -20.6        | 10.6         | -46.07                  | -40             | -6.07       | V        |
| High Channel, 3690MHz |                     |     |                |              |              |                         |                 |             |          |
| 7.379                 | -75.72              | Pk  | 35.6           | -24.4        | 10.9         | -53.62                  | -40             | -13.62      | H        |
| 11.056                | -75.71              | Pk  | 37.9           | -21          | 10.6         | -48.21                  | -40             | -8.21       | H        |
| 7.348                 | -74.67              | Pk  | 35.6           | -24.8        | 11.1         | -52.77                  | -40             | -12.77      | V        |
| 11.035                | -75.88              | Pk  | 37.9           | -21          | 10.9         | -48.08                  | -40             | -8.08       | V        |
| 14.745                | -76.34              | Pk  | 39.9           | -20.2        | 10           | -46.64                  | -40             | -6.64       | V        |
| 14.75                 | -76.15              | Pk  | 39.9           | -20.4        | 10.1         | -46.55                  | -40             | -6.55       | H        |

Pk - Peak detector

### 9.4.7. LTE BAND 66

|                |                   |
|----------------|-------------------|
| Company:       |                   |
| Project #:     | 12607353          |
| Date:          | 5/20/2019         |
| Test Engineer: | 31300             |
| Configuration: | EUT Only          |
| Mode:          | LTE 66 QPSK 20MHz |
| Chamber #:     | Chamber A         |

| Frequency (GHz)       | Meter Reading (dBm) | Det | AF T346 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|-----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 1720MHz  |                     |     |                |              |              |                         |                 |             |          |
| 3.722                 | -65.17              | Pk  | 32.8           | -30          | 11.3         | -51.07                  | -13             | -38.07      | H        |
| 4.862                 | -67.09              | Pk  | 34.1           | -28.4        | 11.3         | -50.09                  | -13             | -37.09      | H        |
| 11.525                | -71.98              | Pk  | 38.2           | -20.9        | 10.9         | -43.78                  | -13             | -30.78      | H        |
| 4.865                 | -66.74              | Pk  | 34             | -28.4        | 11.1         | -50.04                  | -13             | -37.04      | V        |
| 10.673                | -72.12              | Pk  | 37.9           | -21.1        | 10.9         | -44.42                  | -13             | -31.42      | V        |
| 5.156                 | -67.85              | Pk  | 34.2           | -28.6        | 11.3         | -50.95                  | -13             | -37.95      | V        |
| Mid Channel, 1745MHz  |                     |     |                |              |              |                         |                 |             |          |
| 3.768                 | -65.5               | Pk  | 33.1           | -29.7        | 11.4         | -50.7                   | -13             | -37.70      | H        |
| 15.606                | -71.1               | Pk  | 40.5           | -20.6        | 10.9         | -40.3                   | -13             | -27.30      | H        |
| 4.851                 | -66.24              | Pk  | 34.1           | -28.6        | 11.3         | -49.44                  | -13             | -36.44      | V        |
| 8.032                 | -70.01              | Pk  | 35.7           | -24.3        | 11.4         | -47.21                  | -13             | -34.21      | V        |
| 3.368                 | -66.66              | Pk  | 32.8           | -30.1        | 11.6         | -52.36                  | -13             | -39.36      | V        |
| 6.381                 | -68.39              | Pk  | 35.3           | -26.3        | 11           | -48.39                  | -13             | -35.39      | H        |
| High Channel, 1770MHz |                     |     |                |              |              |                         |                 |             |          |
| 3.899                 | -65.53              | Pk  | 33.4           | -29.4        | 11.1         | -50.43                  | -13             | -37.43      | H        |
| 3.873                 | -65.82              | Pk  | 33.4           | -29.5        | 12.1         | -49.82                  | -13             | -36.82      | V        |
| 4.854                 | -67.12              | Pk  | 34.1           | -28.6        | 11.4         | -50.22                  | -13             | -37.22      | V        |
| 6.259                 | -69.39              | Pk  | 35.4           | -26.5        | 11.1         | -49.39                  | -13             | -36.39      | H        |
| 9.689                 | -70.37              | Pk  | 36.9           | -22.1        | 11.1         | -44.47                  | -13             | -31.47      | V        |
| 13.637                | -70.66              | Pk  | 38.7           | -20.8        | 10.8         | -41.96                  | -13             | -28.96      | H        |

Pk - Peak detector

|                |                    |
|----------------|--------------------|
| Company:       |                    |
| Project #:     | 12607353           |
| Date:          | 5/20/2019          |
| Test Engineer: | 31300              |
| Configuration: | EUT Only           |
| Mode:          | LTE 66 16QAM 20MHz |
| Chamber #:     | Chamber A          |

| Frequency (GHz)       | Meter Reading (dBm) | Det | AF T346 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|-----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 1720MHz  |                     |     |                |              |              |                         |                 |             |          |
| 3.872                 | -66.13              | Pk  | 33.4           | -29.5        | 11.9         | -50.33                  | -13             | -37.33      | H        |
| 5.068                 | -66.96              | Pk  | 34.1           | -28.7        | 10.7         | -50.86                  | -13             | -37.86      | H        |
| 10.853                | -72.29              | Pk  | 37.9           | -20.3        | 10.7         | -43.99                  | -13             | -30.99      | H        |
| 3.921                 | -65.9               | Pk  | 33.4           | -29.6        | 11.3         | -50.8                   | -13             | -37.80      | V        |
| 5.1                   | -67.44              | Pk  | 34.2           | -28.4        | 11.4         | -50.24                  | -13             | -37.24      | V        |
| 13.603                | -70.86              | Pk  | 38.7           | -20.5        | 10.3         | -42.36                  | -13             | -29.36      | V        |
| Mid Channel, 1745MHz  |                     |     |                |              |              |                         |                 |             |          |
| 3.81                  | -65.38              | Pk  | 33.4           | -29.5        | 11.2         | -50.28                  | -13             | -37.28      | H        |
| 11.933                | -71.73              | Pk  | 38.7           | -21          | 10.6         | -43.43                  | -13             | -30.43      | H        |
| 4.324                 | -66.68              | Pk  | 33.5           | -28.7        | 11.1         | -50.78                  | -13             | -37.78      | V        |
| 4.856                 | -66.95              | Pk  | 34.1           | -28.6        | 11.4         | -50.05                  | -13             | -37.05      | V        |
| 6.371                 | -69.05              | Pk  | 35.4           | -26.3        | 10.9         | -49.05                  | -13             | -36.05      | V        |
| 6.502                 | -68.85              | Pk  | 35.6           | -26          | 10.9         | -48.35                  | -13             | -35.35      | H        |
| High Channel, 1770MHz |                     |     |                |              |              |                         |                 |             |          |
| 3.831                 | -66.01              | Pk  | 33.4           | -29.4        | 11.3         | -50.71                  | -13             | -37.71      | H        |
| 3.875                 | -65.75              | Pk  | 33.4           | -29.5        | 12.2         | -49.65                  | -13             | -36.65      | V        |
| 8.204                 | -70.37              | Pk  | 35.7           | -24          | 11.1         | -47.57                  | -13             | -34.57      | V        |
| 12.516                | -72.71              | Pk  | 38.9           | -20.4        | 10.6         | -43.61                  | -13             | -30.61      | V        |
| 5.946                 | -68.32              | Pk  | 35.1           | -27.1        | 10.8         | -49.52                  | -13             | -36.52      | H        |
| 14.31                 | -71.04              | Pk  | 39.3           | -20.2        | 11.1         | -40.84                  | -13             | -27.84      | H        |

Pk - Peak detector

## 9.5. FIELD STRENGTH OF SPURIOUS RADIATION, ANT 6

### 9.5.1. LTE BAND 48

|                |                   |
|----------------|-------------------|
| Company:       |                   |
| Project #:     | 12607353          |
| Date:          | 6/28/2019         |
| Test Engineer: | 52277             |
| Configuration: | EUT Only          |
| Mode:          | LTE 48 QPSK 20MHz |
| Chamber #:     | Chamber A         |

| Frequency (GHz)       | Meter Reading (dBm) | Det | AF T346 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|-----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 3560MHz  |                     |     |                |              |              |                         |                 |             |          |
| 7.252                 | -73.79              | Pk  | 35.9           | -24.1        | 10.7         | -51.29                  | -25             | -26.29      | H        |
| 10.877                | -75.79              | Pk  | 37.9           | -19.4        | 10.6         | -46.69                  | -25             | -21.69      | H        |
| 7.251                 | -74.42              | Pk  | 35.9           | -24.1        | 11.3         | -51.32                  | -25             | -26.32      | V        |
| 10.877                | -76.95              | Pk  | 37.9           | -19.4        | 10.9         | -47.55                  | -25             | -22.55      | V        |
| 14.506                | -72.94              | Pk  | 39.4           | -19.7        | 10.5         | -42.74                  | -25             | -17.74      | H        |
| 14.507                | -74.96              | Pk  | 39.4           | -19.7        | 10.5         | -44.76                  | -25             | -19.76      | V        |
| Mid Channel, 3625MHz  |                     |     |                |              |              |                         |                 |             |          |
| 7.384                 | -74.91              | Pk  | 35.8           | -23.5        | 10.9         | -51.71                  | -25             | -26.71      | H        |
| 11.073                | -75                 | Pk  | 37.9           | -19.9        | 10.4         | -46.6                   | -25             | -21.6       | H        |
| 7.383                 | -75.14              | Pk  | 35.8           | -23.5        | 11.3         | -51.54                  | -25             | -26.54      | V        |
| 11.071                | -75.06              | Pk  | 37.9           | -19.9        | 10.6         | -46.46                  | -25             | -21.46      | V        |
| 14.787                | -76.09              | Pk  | 39.7           | -18.6        | 10.9         | -44.09                  | -25             | -19.09      | V        |
| 14.789                | -75.52              | Pk  | 39.7           | -18.7        | 10.9         | -43.62                  | -25             | -18.62      | H        |
| High Channel, 3690MHz |                     |     |                |              |              |                         |                 |             |          |
| 7.36                  | -74.07              | Pk  | 35.6           | -24.6        | 10.8         | -52.27                  | -40             | -12.27      | H        |
| 11.067                | -75.85              | Pk  | 37.9           | -20.9        | 10.5         | -48.35                  | -40             | -8.35       | H        |
| 7.368                 | -74.04              | Pk  | 35.6           | -24.6        | 11.4         | -51.64                  | -40             | -11.64      | V        |
| 11.068                | -76.4               | Pk  | 37.9           | -20.9        | 10.7         | -48.7                   | -40             | -8.7        | V        |
| 14.757                | -76.32              | Pk  | 39.9           | -20.3        | 10.3         | -46.42                  | -40             | -6.42       | H        |
| 14.758                | -74.16              | Pk  | 39.9           | -20.3        | 10.2         | -44.36                  | -40             | -4.36       | V        |

Pk - Peak detector

|                |                    |
|----------------|--------------------|
| Company:       |                    |
| Project #:     | 12607353           |
| Date:          | 6/28/2019          |
| Test Engineer: | 52277              |
| Configuration: | EUT Only           |
| Mode:          | LTE 48 16QAM 20MHz |
| Chamber #:     | Chamber A          |

| Frequency (GHz)       | Meter Reading (dBm) | Det | AF T346 (dB/m) | Amp/Cbl (dB) | Amp/Cbl (dB) | Corrected Reading (dBm) | Harmonics limit | Margin (dB) | Polarity |
|-----------------------|---------------------|-----|----------------|--------------|--------------|-------------------------|-----------------|-------------|----------|
| Low Channel, 3560MHz  |                     |     |                |              |              |                         |                 |             |          |
| 7.251                 | -71.93              | Pk  | 35.9           | -24.1        | 10.7         | -49.43                  | -25             | -24.43      | H        |
| 10.867                | -75.17              | Pk  | 38             | -19.6        | 10.9         | -45.87                  | -25             | -20.87      | H        |
| 7.25                  | -73.87              | Pk  | 35.9           | -24.1        | 11.2         | -50.87                  | -25             | -25.87      | V        |
| 10.869                | -76.08              | Pk  | 37.9           | -19.5        | 11.1         | -46.58                  | -25             | -21.58      | V        |
| 14.507                | -74.34              | Pk  | 39.4           | -19.7        | 10.5         | -44.14                  | -25             | -19.14      | V        |
| 14.509                | -73.18              | Pk  | 39.4           | -19.7        | 10.7         | -42.78                  | -25             | -17.78      | H        |
| Mid Channel, 3625MHz  |                     |     |                |              |              |                         |                 |             |          |
| 7.384                 | -75.44              | Pk  | 35.8           | -23.5        | 10.9         | -52.24                  | -25             | -27.24      | H        |
| 11.068                | -74.93              | Pk  | 37.9           | -19.8        | 10.5         | -46.33                  | -25             | -21.33      | H        |
| 7.383                 | -74.47              | Pk  | 35.8           | -23.5        | 11.3         | -50.87                  | -25             | -25.87      | V        |
| 11.068                | -75.82              | Pk  | 37.9           | -19.8        | 10.7         | -47.02                  | -25             | -22.02      | V        |
| 14.758                | -75.64              | Pk  | 39.7           | -18.7        | 10.2         | -44.44                  | -25             | -19.44      | V        |
| 14.76                 | -75.65              | Pk  | 39.7           | -18.7        | 10.3         | -44.35                  | -25             | -19.35      | H        |
| High Channel, 3690MHz |                     |     |                |              |              |                         |                 |             |          |
| 7.395                 | -74.74              | Pk  | 35.5           | -24.7        | 10.6         | -53.34                  | -40             | -13.34      | H        |
| 11.073                | -76.41              | Pk  | 37.9           | -20.9        | 10.4         | -49.01                  | -40             | -9.01       | H        |
| 7.389                 | -75.64              | Pk  | 35.5           | -24.7        | 10.9         | -53.94                  | -40             | -13.94      | V        |
| 11.074                | -76                 | Pk  | 37.9           | -20.9        | 10.5         | -48.5                   | -40             | -8.5        | V        |
| 14.764                | -75.67              | Pk  | 39.9           | -20.5        | 10.5         | -45.77                  | -40             | -5.77       | H        |
| 14.769                | -73.49              | Pk  | 40             | -20.3        | 10.4         | -43.39                  | -40             | -3.39       | V        |

Pk - Peak detector

## **10. SETUP PHOTOS**

Please see setup photo report 12607353-EP1V1

**END OF REPORT**