

# VARIANT FCC TEST REPORT

## (PART 27)

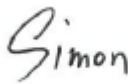
|            |                                                                            |
|------------|----------------------------------------------------------------------------|
| Applicant: | Honeywell International Inc<br>Honeywell Safety and Productivity Solutions |
| Address:   | 9680 Old Bailes Road, Fort Mill, SC 29707 United States                    |

|                           |                                                                            |
|---------------------------|----------------------------------------------------------------------------|
| Manufacturer or Supplier: | Honeywell International Inc<br>Honeywell Safety and Productivity Solutions |
| Address:                  | 9680 Old Bailes Road, Fort Mill, SC 29707 United States                    |
| Product:                  | Mobile Computer                                                            |
| Brand Name:               | Honeywell                                                                  |
| Model Name:               | CT45P-L1N-E                                                                |
| FCC ID:                   | HD5-CT45PL1NE                                                              |
| Date of tests:            | Jun. 08, 2021 ~ Sep. 25, 2021                                              |

The tests have been carried out according to the requirements of the following standard:

☒ FCC Part 27, Subpart C, M    ☒ ANSI/TIA/EIA-603-D  
☒ FCC Part 2                      ☒ ANSI/TIA/EIA-603-E    ☒ ANSI C63.26-2015

CONCLUSION: The submitted sample was found to COMPLY with the test requirement

|                                                                                     |                                                                                       |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Prepared by Simon Wang<br>Engineer / Mobile Department                              | Approved by Luke Lu<br>Manager / Mobile Department                                    |
|  |  |
| Date: Sep. 26, 2021                                                                 | Date: Sep. 26, 2021                                                                   |

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## TABLE OF CONTENTS

|                                                                |           |
|----------------------------------------------------------------|-----------|
| <b>RELEASE CONTROL RECORD .....</b>                            | <b>4</b>  |
| <b>1 SUMMARY OF TEST RESULTS .....</b>                         | <b>5</b>  |
| 1.1 MEASUREMENT UNCERTAINTY .....                              | 5         |
| 1.2 TEST SITE AND INSTRUMENTS .....                            | 6         |
| <b>2 GENERAL INFORMATION .....</b>                             | <b>7</b>  |
| 2.1 GENERAL DESCRIPTION OF EUT .....                           | 7         |
| 2.2 CONFIGURATION OF SYSTEM UNDER TEST .....                   | 12        |
| 2.3 DESCRIPTION OF SUPPORT UNITS .....                         | 13        |
| 2.4 TEST ITEM AND TEST CONFIGURATION .....                     | 13        |
| 2.5 GENERAL DESCRIPTION OF APPLIED STANDARDS .....             | 20        |
| <b>3 TEST TYPES AND RESULTS .....</b>                          | <b>21</b> |
| 3.1 OUTPUT POWER MEASUREMENT .....                             | 21        |
| 3.1.1 LIMITS OF OUTPUT POWER MEASUREMENT .....                 | 21        |
| 3.1.2 TEST PROCEDURES .....                                    | 21        |
| 3.1.3 TEST SETUP .....                                         | 22        |
| 3.1.4 TEST RESULTS .....                                       | 23        |
| 3.2 FREQUENCY STABILITY MEASUREMENT .....                      | 59        |
| 3.2.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT .....          | 59        |
| 3.2.2 TEST PROCEDURE .....                                     | 59        |
| 3.2.3 TEST SETUP .....                                         | 59        |
| 3.2.4 TEST RESULTS .....                                       | 60        |
| 3.3 OCCUPIED BANDWIDTH MEASUREMENT .....                       | 74        |
| 3.3.1 LIMITS OF OCCUPIED BANDWIDTH MEASUREMENT .....           | 74        |
| 3.3.2 TEST SETUP .....                                         | 74        |
| 3.3.3 TEST PROCEDURES .....                                    | 74        |
| 3.3.4 TEST RESULTS .....                                       | 75        |
| 3.4 BAND EDGE MEASUREMENT .....                                | 95        |
| 3.4.1 LIMITS OF BAND EDGE MEASUREMENT .....                    | 95        |
| 3.4.2 TEST SETUP .....                                         | 95        |
| 3.4.3 TEST PROCEDURES .....                                    | 96        |
| 3.4.4 TEST RESULTS .....                                       | 97        |
| 3.5 CONDUCTED SPURIOUS EMISSIONS .....                         | 155       |
| 3.5.1 LIMITS OF CONDUCTED SPURIOUS EMISSIONS MEASUREMENT ..... | 155       |
| 3.5.2 TEST PROCEDURE .....                                     | 155       |
| 3.5.3 TEST SETUP .....                                         | 155       |
| 3.5.4 TEST RESULTS .....                                       | 156       |
| 3.6 RADIATED EMISSION MEASUREMENT .....                        | 190       |
| 3.6.1 LIMITS OF RADIATED EMISSION MEASUREMENT .....            | 190       |
| 3.6.2 TEST PROCEDURES .....                                    | 190       |
| 3.6.3 DEVIATION FROM TEST STANDARD .....                       | 190       |
| 3.6.4 TEST SETUP .....                                         | 191       |
| 3.6.5 TEST RESULTS .....                                       | 192       |
| 3.7 PEAK TO AVERAGE RATIO .....                                | 250       |
| 3.7.1 LIMITS OF PEAK TO AVERAGE RATIO MEASUREMENT .....        | 250       |
| 3.7.2 TEST SETUP .....                                         | 250       |
| 3.7.3 TEST PROCEDURES .....                                    | 250       |
| 3.7.4 TEST RESULTS .....                                       | 251       |



**BUREAU  
VERITAS**

**Test Report No.: W7L-P21080009RF17**

|                                                                                                       |            |
|-------------------------------------------------------------------------------------------------------|------------|
| <b>4 INFORMATION ON THE TESTING LABORATORIES .....</b>                                                | <b>264</b> |
| <b>5 APPENDIX A – MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT<br/>BY THE LAB .....</b> | <b>265</b> |



Test Report No.: W7L-P21080009RF17

## RELEASE CONTROL RECORD

| ISSUE NO.         | REASON FOR CHANGE                                                                         | DATE ISSUED   |
|-------------------|-------------------------------------------------------------------------------------------|---------------|
| W7L-P21080006RF17 | Original release                                                                          | Sep. 08, 2021 |
| W7L-P21080009RF17 | Based on the original report W7L-P21080006RF17 Changing the SIM to 1 Nano SIM and 1 E-SIM | Sep. 26, 2021 |

# 1 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

| APPLIED STANDARD: FCC PART 27 & PART 2 |                                         |            |
|----------------------------------------|-----------------------------------------|------------|
| STANDARD SECTION                       | 1.1.1.1.1.1TEST TYPE AND LIMIT          | RESULT     |
| 2.1046<br>27.50(h)(2)                  | Equivalent Isotropically Radiated Power | Compliance |
| 2.1055<br>27.54                        | Frequency Stability                     | Compliance |
| 2.1049<br>27.53(m)(6)                  | Occupied Bandwidth                      | Compliance |
| 2.1051<br>27.53(m)(4)(6)               | Band Edge Measurements                  | Compliance |
| 2.1051<br>27.53(m)(4)(6)               | Conducted Spurious Emissions            | Compliance |
| 2.1053<br>27.53(m)(4)(6)               | Radiated Spurious Emissions             | Compliance |

## 1.1 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

| MEASUREMENT                                        | UNCERTAINTY           |
|----------------------------------------------------|-----------------------|
| Frequency Stability                                | $\pm 76.97\text{Hz}$  |
| Radiated emissions & Radiated Power (30MHz~1GMHz)  | $\pm 4.98\text{dB}$   |
| Radiated emissions & Radiated Power (1GMHz ~6GMHz) | $\pm 4.70\text{dB}$   |
| Radiated emissions (6GMHz ~18GMHz)                 | $\pm 4.60\text{dB}$   |
| Radiated emissions (18GMHz ~40GMHz)                | $\pm 4.12\text{dB}$   |
| Conducted emissions                                | $\pm 4.01\text{dB}$   |
| Occupied Channel Bandwidth                         | $\pm 43.58\text{KHz}$ |
| Conducted Output power                             | $\pm 2.06\text{dB}$   |
| Band Edge Measurements                             | $\pm 4.70\text{dB}$   |

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of  $k=2$ .

## 1.2 TEST SITE AND INSTRUMENTS

| Equipment                             | Manufacturer | Model No.                   | Serial No.                  | Last Cal.   | Next Cal.   |
|---------------------------------------|--------------|-----------------------------|-----------------------------|-------------|-------------|
| MXE EMI Receiver                      | KEYSIGHT     | N9038A-544                  | MY54450026                  | Apr. 22,21  | Apr. 21,22  |
| EXA Signal Analyzer                   | KEYSIGHT     | N9010A-544                  | MY54510355                  | Jun. 04,20  | Jun. 03,21  |
| EXA Signal Analyzer                   | KEYSIGHT     | N9010A-544                  | MY54510355                  | Jun. 03,21  | Jun. 02,22  |
| Bilog Antenna                         | ETS-LINDGREN | 3143B                       | 00161965                    | Mar. 05,21  | Mar. 04,22  |
| Horn Antenna                          | ETS-LINDGREN | 3117                        | 00168728                    | Apr. 02,21  | Apr. 01,22  |
| Horn Antenna (18GHz-40GHz)            | N/A          | QWH-SL-18-40-K-SG/QMS-00361 | 15433                       | Aug. 26, 20 | Aug. 25, 21 |
| Horn Antenna (18GHz-40GHz)            | N/A          | QWH-SL-18-40-K-SG/QMS-00361 | 15433                       | Aug. 25, 21 | Aug. 24, 22 |
| Radio Communication Analyzer          | ANRITSU      | MT8820C                     | 6201465426                  | Feb. 25,21  | Feb. 24,22  |
| Signal Pre-Amplifier                  | EMSI         | EMC 9135                    | 980249                      | Jun. 03,20  | Jun. 02,21  |
| Signal Pre-Amplifier                  | EMSI         | EMC 9135                    | 980249                      | Jun. 02,21  | Jun. 01,22  |
| Signal Pre-Amplifier                  | EMSI         | EMC 012645B                 | 980257                      | Jun. 04,20  | Jun. 03,21  |
| Signal Pre-Amplifier                  | EMSI         | EMC 012645B                 | 980257                      | Jun. 03,21  | Jun. 02,22  |
| Signal Pre-Amplifier                  | EMSI         | EMC 184045B                 | 980259                      | Apr. 22,21  | Apr. 21,22  |
| 3m Semi-anechoic Chamber              | ETS-LINDGREN | 9m*6m*6m                    | Euroshieldpn-CT0001143-1216 | May. 19,20  | May. 18,23  |
| Test Software                         | E3           | V 9.160323                  | N/A                         | N/A         | N/A         |
| Test Software                         | ADT          | ADT_Radiated_V 7.6.15.9.2   | N/A                         | N/A         | N/A         |
| 10dB Attenuator                       | JFW/USA      | 50HF-010-SMA                | 1505                        | Jun. 04,20  | Jun. 03,21  |
| 10dB Attenuator                       | JFW/USA      | 50HF-010-SMA                | 1505                        | Jun. 03,21  | Jun. 02,22  |
| Power Meter                           | Anritsu      | ML2495A                     | 1506002                     | Apr. 07,21  | Apr. 06,22  |
| Power Sensor                          | Anritsu      | MA2411B                     | 1339352                     | May. 07,21  | May. 06,22  |
| Temperature Chamber                   | ESPEC        | SH-242                      | 93000855                    | Jun. 03,20  | Jun. 02,21  |
| Temperature Chamber                   | ESPEC        | SH-242                      | 93000855                    | Jun. 02,21  | Jun. 01,22  |
| MXG Analog Microwave Signal Generator | KEYSIGHT     | N5183A                      | MY50143024                  | Mar. 05,21  | Mar. 04,22  |
| Power Divider                         | MCLI/USA     | PS2-15                      | 24880                       | N/A         | N/A         |

- NOTE:**
1. The calibration interval of the above test instruments is 12 months or 36 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
  2. The test was performed in 3m Semi-anechoic Chamber and RF Oven Room.
  3. The horn antenna is used only for the measurement of emission frequency above 1GHz if tested.
  4. The FCC Site Registration No. is 525120; The Designation No. is CN1171.

## 2 GENERAL INFORMATION

### 2.1 GENERAL DESCRIPTION OF EUT

|                                  |                                                              |                        |
|----------------------------------|--------------------------------------------------------------|------------------------|
| <b>PRODUCT</b>                   | Mobile Computer                                              |                        |
| <b>BRAND NAME</b>                | Honeywell                                                    |                        |
| <b>MODEL NAME</b>                | CT45P-L1N-E                                                  |                        |
| <b>NOMINAL VOLTAGE</b>           | 3.85Vdc (Lithium-ion cell, battery)                          |                        |
| <b>MODULATION<br/>TECHNOLOGY</b> | <b>WCDMA IV</b>                                              | HSDPA, HSUPA, DC-HSDPA |
|                                  | <b>LTE</b>                                                   | QPSK, 16QAM, 64QAM     |
|                                  | <b>WCDMA IV</b>                                              | 1712.4MHz ~ 1752.6MHz  |
|                                  | <b>LTE Band 7<br/>Channel Bandwidth: 5MHz</b>                | 2502.5MHz ~ 2567.5MHz  |
|                                  | <b>LTE Band 7<br/>Channel Bandwidth: 10MHz</b>               | 2505MHz ~ 2565MHz      |
|                                  | <b>LTE Band 7<br/>Channel Bandwidth: 15MHz</b>               | 2507.5MHz ~ 2562.5MHz  |
|                                  | <b>LTE Band 7<br/>Channel Bandwidth: 20MHz</b>               | 2510MHz ~ 2560MHz      |
|                                  | <b>LTE Band CA_7C<br/>Channel Bandwidth:<br/>10MHz+20MHz</b> | 2505.5MHz ~ 2560MHz    |
|                                  | <b>LTE Band CA_7C<br/>Channel Bandwidth:<br/>15MHz+10MHz</b> | 2507.5MHz ~ 2564.7MHz  |
|                                  | <b>LTE Band CA_7C<br/>Channel Bandwidth:<br/>15MHz+15MHz</b> | 2507.5MHz ~ 2562.5MHz  |
|                                  | <b>LTE Band CA_7C<br/>Channel Bandwidth:<br/>15MHz+20MHz</b> | 2507.8MHz ~ 2560MHz    |
|                                  | <b>LTE Band CA_7C<br/>Channel Bandwidth:<br/>20MHz+10MHz</b> | 2510MHz ~ 2564.5MHz    |
|                                  | <b>LTE Band CA_7C<br/>Channel Bandwidth:<br/>20MHz+15MHz</b> | 2510MHz ~ 2562.5MHz    |
|                                  | <b>LTE Band CA_7C<br/>Channel Bandwidth:<br/>20MHz+20MHz</b> | 2510MHz ~ 2560MHz      |
|                                  | <b>LTE Band 38<br/>Channel Bandwidth: 5MHz</b>               | 2572.5MHz ~ 2617.5MHz  |
|                                  | <b>LTE Band 38<br/>Channel Bandwidth: 10MHz</b>              | 2575MHz ~ 2615MHz      |

|                     |                                                      |                       |
|---------------------|------------------------------------------------------|-----------------------|
|                     | LTE Band 38<br>Channel Bandwidth: 15MHz              | 2577.5MHz ~ 2612.5MHz |
|                     | LTE Band 38<br>Channel Bandwidth: 20MHz              | 2580MHz ~ 2610MHz     |
|                     | LTE Band 41<br>Channel Bandwidth: 5MHz               | 2498.5MHz ~ 2687.5MHz |
|                     | LTE Band 41<br>Channel Bandwidth: 10MHz              | 2501MHz ~ 2685MHz     |
|                     | LTE Band 41<br>Channel Bandwidth: 15MHz              | 2503.5MHz ~ 2682.5MHz |
|                     | LTE Band 41<br>Channel Bandwidth: 20MHz              | 2506MHz ~ 2680MHz     |
| EMISSION DESIGNATOR | WCDMA IV                                             | 4M16F9W               |
|                     | LTE Band 7<br>Channel Bandwidth: 5MHz                | QPSK: 4M49G7D         |
|                     |                                                      | 16QAM: 4M48W7D        |
|                     |                                                      | 64QAM: 4M49W7D        |
|                     | LTE Band 7<br>Channel Bandwidth: 10MHz               | QPSK: 9M01G7D         |
|                     |                                                      | 16QAM: 8M97W7D        |
|                     |                                                      | 64QAM: 8M99W7D        |
|                     | LTE Band 7<br>Channel Bandwidth: 15MHz               | QPSK: 13M6G7D         |
|                     |                                                      | 16QAM: 13M5W7D        |
|                     |                                                      | 64QAM: 13M5W7D        |
|                     | LTE Band 7<br>Channel Bandwidth: 20MHz               | QPSK: 18M0G7D         |
|                     |                                                      | 16QAM: 18M0W7D        |
|                     |                                                      | 64QAM: 18M0W7D        |
|                     | LTE Band CA_7C<br>Channel Bandwidth:<br>10MHz+20MHz  | QPSK: 28M2G7D         |
|                     |                                                      | 16QAM: 28M1W7D        |
|                     |                                                      | 64QAM: 28M0W7D        |
|                     | LTE Band CA_7C<br>Channel Bandwidth:<br>15MHz +10MHz | QPSK: 23M6G7D         |
|                     |                                                      | 16QAM: 23M6W7D        |
|                     |                                                      | 64QAM: 23M6W7D        |
|                     | LTE Band CA_7C<br>Channel Bandwidth:<br>15MHz +15MHz | QPSK: 28M7G7D         |
|                     |                                                      | 16QAM: 28M7W7D        |
|                     |                                                      | 64QAM: 28M7W7D        |
|                     | LTE Band CA_7C<br>Channel Bandwidth:<br>15MHz +20MHz | QPSK: 32M9G7D         |
|                     |                                                      | 16QAM: 32M9W7D        |
|                     |                                                      | 64QAM: 32M8W7D        |
|                     | LTE Band CA_7C<br>Channel Bandwidth:<br>20MHz +10MHz | QPSK: 28M1G7D         |
|                     |                                                      | 16QAM: 28M0W7D        |
|                     |                                                      | 64QAM: 28M0W7D        |
|                     | LTE Band CA_7C<br>Channel Bandwidth:<br>20MHz +15MHz | QPSK: 32M8G7D         |
|                     |                                                      | 16QAM: 32M8W7D        |
|                     |                                                      | 64QAM: 32M8W7D        |
|                     | LTE Band CA_7C                                       | QPSK: 37M6G7D         |

|                 |                                                  |                                                   |
|-----------------|--------------------------------------------------|---------------------------------------------------|
|                 | Channel Bandwidth: 20MHz +20MHz                  | 16QAM: 37M6W7D<br>64QAM: 37M6W7D                  |
|                 | LTE Band 38<br>Channel Bandwidth: 5MHz           | QPSK: 4M48G7D<br>16QAM: 4M47W7D<br>64QAM: 4M47W7D |
|                 | LTE Band 38<br>Channel Bandwidth: 10MHz          | QPSK: 8M97G7D<br>16QAM: 8M96W7D<br>64QAM: 8M96W7D |
|                 | LTE Band 38<br>Channel Bandwidth: 15MHz          | QPSK: 13M4G7D<br>16QAM: 13M5W7D<br>64QAM: 13M5W7D |
|                 | LTE Band 38<br>Channel Bandwidth: 20MHz          | QPSK: 17M9G7D<br>64QAM: 17M9W7D<br>16QAM: 17M9W7D |
|                 | LTE Band 41<br>Channel Bandwidth: 5MHz           | QPSK: 4M48G7D<br>16QAM: 4M48W7D<br>64QAM: 4M47W7D |
|                 | LTE Band 41<br>Channel Bandwidth: 10MHz          | QPSK: 8M97G7D<br>16QAM: 8M96W7D<br>64QAM: 8M96W7D |
|                 | LTE Band 41<br>Channel Bandwidth: 15MHz          | QPSK: 13M5G7D<br>16QAM: 13M5W7D<br>64QAM: 13M4W7D |
|                 | LTE Band 41<br>Channel Bandwidth: 20MHz          | QPSK: 17M9G7D<br>16QAM: 17M9W7D<br>64QAM: 17M9W7D |
| MAX. EIRP POWER | WCDMA IV                                         | 153.11mW                                          |
|                 | LTE Band 7<br>Channel Bandwidth: 5MHz            | 237.14mW                                          |
|                 | LTE Band 7<br>Channel Bandwidth: 10MHz           | 238.78mW                                          |
|                 | LTE Band 7<br>Channel Bandwidth: 15MHz           | 238.78mW                                          |
|                 | LTE Band 7<br>Channel Bandwidth: 20MHz           | 240.99mW                                          |
|                 | LTE Band CA_7C<br>Channel Bandwidth: 10MHz+20MHz | 230.14mW                                          |
|                 | LTE Band CA_7C<br>Channel Bandwidth: 15MHz+10MHz | 225.4mW                                           |
|                 | LTE Band CA_7C<br>Channel Bandwidth: 15MHz+15MHz | 221.82mW                                          |

|                     |                                                                                                                                                                                                           |                                                                                                             |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
|                     | LTE Band CA_7C<br>Channel Bandwidth:<br>15MHz+20MHz                                                                                                                                                       | 221.31mW                                                                                                    |
|                     | LTE Band CA_7C<br>Channel Bandwidth:<br>20MHz+10MHz                                                                                                                                                       | 221.82mW                                                                                                    |
|                     | LTE Band CA_7C<br>Channel Bandwidth:<br>20MHz+15MHz                                                                                                                                                       | 224.91mW                                                                                                    |
|                     | LTE Band CA_7C<br>Channel Bandwidth:<br>20MHz+20MHz                                                                                                                                                       | 232.27mW                                                                                                    |
|                     | LTE Band 38<br>Channel Bandwidth: 5MHz                                                                                                                                                                    | 242.10mW                                                                                                    |
|                     | LTE Band 38<br>Channel Bandwidth: 10MHz                                                                                                                                                                   | 220.29mW                                                                                                    |
|                     | LTE Band 38<br>Channel Bandwidth: 15MHz                                                                                                                                                                   | 221.82mW                                                                                                    |
|                     | LTE Band 38<br>Channel Bandwidth: 20MHz                                                                                                                                                                   | 222.33mW                                                                                                    |
|                     | LTE Band 41<br>Channel Bandwidth: 5MHz                                                                                                                                                                    | 261.82mW                                                                                                    |
|                     | LTE Band 41<br>Channel Bandwidth: 10MHz                                                                                                                                                                   | 261.82mW                                                                                                    |
|                     | LTE Band 41<br>Channel Bandwidth: 15MHz                                                                                                                                                                   | 263.03mW                                                                                                    |
|                     | LTE Band 41<br>Channel Bandwidth: 20MHz                                                                                                                                                                   | 264.85mW                                                                                                    |
|                     | ANTENNA TYPE<br>PIFA Antenna with 2.55 dBi gain for WCDMA IV<br>PIFA Antenna with 2.02 dBi gain for LTE7/ LTE7C<br>PIFA Antenna with 1.73 dBi gain for LTE38<br>PIFA Antenna with 2.02 dBi gain for LTE41 |                                                                                                             |
| HW VERSION          |                                                                                                                                                                                                           | V1.0                                                                                                        |
| SW VERSION          |                                                                                                                                                                                                           | OS.11.002-HON.11.002                                                                                        |
| I/O PORTS           |                                                                                                                                                                                                           | Refer to user's manual                                                                                      |
| CABLE SUPPLIED      |                                                                                                                                                                                                           | USB cable: unshielded without ferrite, 1.25 meter<br>Earphone cable: unshielded without ferrite, 1.27 meter |
| EXTREME TEMPERATURE |                                                                                                                                                                                                           | -10-55 °C                                                                                                   |
| EXTREME VOLTAGE     |                                                                                                                                                                                                           | 3.4V- 4.4V                                                                                                  |

**NOTE:**

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.

2. This product includes the following four SKU which hardware is exactly same, the difference is described as following, Sample 1 was full test, sample 2 verify the worst case, check worst case Radiated emission:

| SAMPLE | EUT CONFIGURATION INFORMATION                                                                        |
|--------|------------------------------------------------------------------------------------------------------|
| 1      | SKU ID:CT45-L1N-37D1E0G ,Assembled Scanner Imager: <a href="#">7-S0703</a>                           |
| 2      | SKU ID:CT45-L1N-38D1E0G ,Assembled Scanner Imager: <a href="#">8 – N6803/S0803</a>                   |
| 3      | SKU ID: CT45-L1N-38D1E0T , Assembled Scanner Imager: <a href="#">8 – N6803/S0803</a> for Turkey Only |
| 4      | SKU ID: CT45-L1N-37D1E0T , Assembled with Scanner: 7-S0703 for Turkey Only                           |

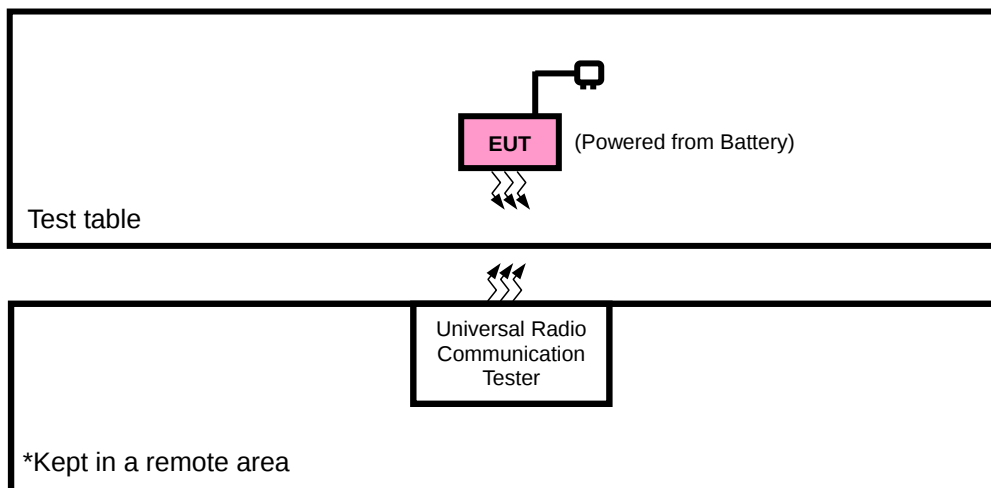
3. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.

**List of Accessory:**

| ACCESSORIES | BRAND     | MODEL                | SPECIFICATION                         |
|-------------|-----------|----------------------|---------------------------------------|
| Battery     | Honeywell | CT50-BTSC            | Capacity : 3.85vdc 4020mAh            |
| AC Adapter  | HONOR     | ADS-12B-06<br>05010E | I/P:100-240Vac, 0.3A<br>O/P: 5Vdc, 2A |
| USB Cable   | Honeywell | CT40-SN              | Shielded, 1.25meter                   |
| Earphone    | VIVO      | N/A                  | Shielded, 1.27meter                   |
| LCD Panel   | CASIL     | CTM10801920T01       | 5.0" FHD(1928*1080)                   |

## 2.2 CONFIGURATION OF SYSTEM UNDER TEST

### FOR RADIATION EMISSION TEST



## 2.3 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

| NO. | PRODUCT   | BRAND    | MODEL NO. | SERIAL NO. | FCC ID |
|-----|-----------|----------|-----------|------------|--------|
| 1   | DC source | LONG WEI | PS-6403D  | 010934269  | N/A    |

| NO. | SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS |
|-----|-----------------------------------------------------|
| 1   | DC Line: Unshielded, Detachable 1.8m                |

## 2.4 TEST ITEM AND TEST CONFIGURATION

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis and antenna ports. The worst case was found when positioned on Y-plane for EIRP and X-axis for radiated emission. Following channel(s) was (were) selected for the final test as listed below:

| EUT<br>CONFIGURE<br>MODE | 1.1.1.1.1.2DESCRIPTION                  |
|--------------------------|-----------------------------------------|
| A                        | EUT + Adapter + USB Cable with LTE link |
| B                        | EUT + Battery with LTE link             |

### WCDMA MODE

| EUT<br>CONFIGURE<br>MODE | TEST ITEM             | AVAILABLE CHANNEL | TESTED CHANNEL   | MODE  |
|--------------------------|-----------------------|-------------------|------------------|-------|
| B                        | EIRP                  | 1312 to 1513      | 1312, 1413, 1513 | WCDMA |
| B                        | FREQUENCY STABILITY   | 1312 to 1513      | 1312, 1513       | WCDMA |
| B                        | OCCUPIED BANDWIDTH    | 1312 to 1513      | 1312, 1413, 1513 | WCDMA |
| B                        | BAND EDGE             | 1312 to 1513      | 1312, 1513       | WCDMA |
| B                        | PEAK TO AVERAGE RATIO | 1312 to 1513      | 1312, 1413, 1513 | WCDMA |
| B                        | CONDUCTED EMISSION    | 1312 to 1513      | 1312, 1413, 1513 | WCDMA |
| A                        | RADIATED EMISSION     | 1312 to 1513      | 1312, 1413, 1513 | WCDMA |

**LTE BAND 7 MODE**

| EUT<br>CONFIGURE<br>MODE | TEST ITEM                   | AVAILABLE<br>CHANNEL | TESTED CHANNEL      | CHANNEL<br>BANDWIDT<br>H | MODULATION         | MODE                 |
|--------------------------|-----------------------------|----------------------|---------------------|--------------------------|--------------------|----------------------|
| B                        | EIRP                        | 20775 to 21425       | 20775, 21100, 21425 | 5MHz                     | QPSK, 16QAM, 64QAM | 1 RB / 0 RB Offset   |
|                          |                             | 20800 to 21400       | 20800, 21100, 21400 | 10MHz                    | QPSK, 16QAM, 64QAM | 1 RB / 0RB Offset    |
|                          |                             | 20825 to 21375       | 20825, 21100, 21375 | 15MHz                    | QPSK, 16QAM, 64QAM | 1 RB / 0 RB Offset   |
|                          |                             | 20850 to 21350       | 20850, 21100, 21350 | 20MHz                    | QPSK, 16QAM, 64QAM | 1 RB / 0 RB Offset   |
| B                        | FREQUENCY<br>STABILITY      | 20775 to 21425       | 20775, 21425        | 5MHz                     | QPSK               | 1 RB / 0 RB Offset   |
|                          |                             | 20800 to 21400       | 20800, 21400        | 10MHz                    | QPSK               | 1 RB / 0RB Offset    |
|                          |                             | 20825 to 21375       | 20825, 21375        | 15MHz                    | QPSK               | 1 RB / 0 RB Offset   |
|                          |                             | 20850 to 21350       | 20850, 21350        | 20MHz                    | QPSK               | 1 RB / 0 RB Offset   |
| B                        | OCCUPIED<br>BANDWIDTH       | 20775 to 21425       | 20775, 21100, 21425 | 5MHz                     | QPSK, 16QAM, 64QAM | 25 RB / 0 RB Offset  |
|                          |                             | 20800 to 21400       | 20800, 21100, 21400 | 10MHz                    | QPSK, 16QAM, 64QAM | 50 RB / 0 RB Offset  |
|                          |                             | 20825 to 21375       | 20825, 21100, 21375 | 15MHz                    | QPSK, 16QAM, 64QAM | 75 RB / 0 RB Offset  |
|                          |                             | 20850 to 21350       | 20850, 21100, 21350 | 20MHz                    | QPSK, 16QAM, 64QAM | 100 RB / 0 RB Offset |
| B                        | BAND EDGE                   | 20775 to 21425       | 20775               | 5MHz                     | QPSK, 16QAM, 64QAM | 1 RB / 0 RB Offset   |
|                          |                             |                      |                     |                          |                    | 25 RB / 0 RB Offset  |
|                          |                             |                      | 21425               | 5MHz                     | QPSK, 16QAM, 64QAM | 1 RB / 24 RB Offset  |
|                          |                             |                      |                     |                          |                    | 25 RB / 0 RB Offset  |
|                          |                             | 20800 to 21400       | 20800               | 10MHz                    | QPSK, 16QAM, 64QAM | 1 RB / 0 RB Offset   |
|                          |                             |                      |                     |                          |                    | 50 RB / 0 RB Offset  |
|                          |                             |                      | 21400               | 10MHz                    | QPSK, 16QAM, 64QAM | 1 RB / 49 RB Offset  |
|                          |                             |                      |                     |                          |                    | 50 RB / 0 RB Offset  |
|                          |                             | 20825 to 21375       | 20825               | 15MHz                    | QPSK, 16QAM, 64QAM | 1 RB / 0 RB Offset   |
|                          |                             |                      |                     |                          |                    | 75 RB / 0 RB Offset  |
|                          |                             |                      | 21375               | 15MHz                    | QPSK, 16QAM, 64QAM | 1 RB / 74 RB Offset  |
|                          |                             |                      |                     |                          |                    | 75 RB / 0 RB Offset  |
|                          |                             | 20850 to 21350       | 20850               | 20MHz                    | QPSK, 16QAM, 64QAM | 1 RB / 0 RB Offset   |
|                          |                             |                      |                     |                          |                    | 100 RB / 0 RB Offset |
|                          |                             |                      | 21350               | 20MHz                    | QPSK, 16QAM, 64QAM | 1 RB / 99 RB Offset  |
|                          |                             |                      |                     |                          |                    | 100 RB / 0 RB Offset |
| B                        | CONDCUDE<br>TED<br>EMISSION | 20775 to 21425       | 20775, 21100, 21425 | 5MHz                     | QPSK               | 1 RB / 0 RB Offset   |
|                          |                             | 20800 to 21400       | 20800, 21100, 21400 | 10MHz                    | QPSK               | 1 RB / 0RB Offset    |
|                          |                             | 20825 to 21375       | 20825, 21100, 21375 | 15MHz                    | QPSK               | 1 RB / 0 RB Offset   |
|                          |                             | 20850 to 21350       | 20850, 21100, 21350 | 20MHz                    | QPSK               | 1 RB / 0 RB Offset   |
| A                        | RADIATED<br>EMISSION        | 20775 to 21425       | 20775, 21100, 21425 | 5MHz                     | QPSK               | 1 RB / 0 RB Offset   |
|                          |                             | 20800 to 21400       | 21100               | 10MHz                    | QPSK               | 1 RB / 0 RB Offset   |
|                          |                             | 20825 to 21375       | 21100               | 15MHz                    | QPSK               | 1 RB / 0 RB Offset   |
|                          |                             | 20850 to 21350       | 21100               | 20MHz                    | QPSK               | 1 RB / 0 RB Offset   |

**Note:** This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.

**LTE BAND CA\_7C MODE**

| EUT<br>CONFIGURE<br>MODE | TEST ITEM             | AVAILABLE<br>PCC CHANNEL | TESTED CHANNEL    | CHANNEL<br>BANDWIDTH | MODULATION         | MODE                         |
|--------------------------|-----------------------|--------------------------|-------------------|----------------------|--------------------|------------------------------|
| B                        | EIRP                  | 20805 to 21206           | Low, Middle, High | 10MHz+20MHz          | QPSK, 16QAM, 64QAM | 1RB/ 49RB&1RB/ 0RB Offset    |
|                          |                       | 20825 to 21277           | Low, Middle, High | 15MHz+10MHz          | QPSK, 16QAM, 64QAM | 1RB/ 74RB&1RB/ 0RB Offset    |
|                          |                       | 20825 to 21225           | Low, Middle, High | 15MHz+15MHz          | QPSK, 16QAM, 64QAM | 1RB/ 74RB&1RB/ 0RB Offset    |
|                          |                       | 20828 to 21179           | Low, Middle, High | 15MHz+20MHz          | QPSK, 16QAM, 64QAM | 1RB/ 74RB&1RB/ 0RB Offset    |
|                          |                       | 20850 to 21251           | Low, Middle, High | 20MHz+10MHz          | QPSK, 16QAM, 64QAM | 1RB/ 99RB&1RB/ 0RB Offset    |
|                          |                       | 20850 to 21201           | Low, Middle, High | 20MHz+15MHz          | QPSK, 16QAM, 64QAM | 1RB/ 99RB&1RB/ 0RB Offset    |
|                          |                       | 20850 to 21152           | Low, Middle, High | 20MHz+20MHz          | QPSK, 16QAM, 64QAM | 1RB/ 99RB&1RB/ 0RB Offset    |
| B                        | OCCUPIED<br>BANDWIDTH | 20805 to 21206           | Low, Middle, High | 10MHz+20MHz          | QPSK, 16QAM, 64QAM | 50RB/ 0RB&100RB/ 0RB Offset  |
|                          |                       | 20825 to 21277           | Low, Middle, High | 15MHz+10MHz          | QPSK, 16QAM, 64QAM | 75RB/ 0RB&50RB/ 0RB Offset   |
|                          |                       | 20825 to 21225           | Low, Middle, High | 15MHz+15MHz          | QPSK, 16QAM, 64QAM | 75RB/ 0RB&75RB/ 0RB Offset   |
|                          |                       | 20828 to 21179           | Low, Middle, High | 15MHz+20MHz          | QPSK, 16QAM, 64QAM | 75RB/ 0RB&100RB/ 0RB Offset  |
|                          |                       | 20850 to 21251           | Low, Middle, High | 20MHz+10MHz          | QPSK, 16QAM, 64QAM | 100RB/ 0RB&50RB/ 0RB Offset  |
|                          |                       | 20850 to 21201           | Low, Middle, High | 20MHz+15MHz          | QPSK, 16QAM, 64QAM | 100RB/ 0RB&75RB/ 0RB Offset  |
|                          |                       | 20850 to 21152           | Low, Middle, High | 20MHz+20MHz          | QPSK, 16QAM, 64QAM | 100RB/ 0RB&100RB/ 0RB Offset |
| B                        | BAND EDGE             | 20805 to 21206           | Low               | 10MHz+20MHz          | QPSK, 16QAM, 64QAM | 1RB/ 0RB&1RB/ 99RB Offset    |
|                          |                       |                          |                   |                      |                    | 1RB/ 49RB&1RB/ 0RB Offset    |
|                          |                       |                          |                   |                      |                    | 50RB/ 0RB&100RB/ 0RB Offset  |
|                          |                       | 20805 to 21206           | High              | 10MHz+20MHz          | QPSK, 16QAM, 64QAM | 1RB/ 0RB&1RB/ 99RB Offset    |
|                          |                       |                          |                   |                      |                    | 1RB/ 49RB&1RB/ 0RB Offset    |
|                          |                       |                          |                   |                      |                    | 50RB/ 0RB&100RB/ 0RB Offset  |
|                          |                       | 20825 to 21277           | Low               | 15MHz+10MHz          | QPSK, 16QAM, 64QAM | 1RB/ 0RB&1RB/ 49RB Offset    |
|                          |                       |                          |                   |                      |                    | 1RB/ 74RB&1RB/ 0RB Offset    |
|                          |                       |                          |                   |                      |                    | 75RB/ 0RB&50RB/ 0RB Offset   |
|                          |                       | 20825 to 21277           | High              | 15MHz+10MHz          | QPSK, 16QAM, 64QAM | 1RB/ 0RB&1RB/ 49RB Offset    |
|                          |                       |                          |                   |                      |                    | 1RB/ 74RB&1RB/ 0RB Offset    |
|                          |                       |                          |                   |                      |                    | 75RB/ 0RB&50RB/ 0RB Offset   |
|                          |                       | 20825 to 21225           | Low               | 15MHz+15MHz          | QPSK, 16QAM, 64QAM | 1RB/ 0RB&1RB/ 74RB Offset    |
|                          |                       |                          |                   |                      |                    | 1RB/ 74RB&1RB/ 0RB Offset    |
|                          |                       |                          |                   |                      |                    | 75RB/ 0RB&75RB/ 0RB Offset   |
|                          |                       | 20825 to 21225           | High              | 15MHz+15MHz          | QPSK, 16QAM, 64QAM | 1RB/ 0RB&1RB/ 74RB Offset    |
|                          |                       |                          |                   |                      |                    | 1RB/ 74RB&1RB/ 0RB Offset    |
|                          |                       |                          |                   |                      |                    | 75RB/ 0RB&75RB/ 0RB Offset   |
|                          |                       | 20828 to 21179           | Low               | 15MHz+20MHz          | QPSK, 16QAM, 64QAM | 1RB/ 0RB&1RB/ 99RB Offset    |
|                          |                       |                          |                   |                      |                    | 1RB/ 74RB&1RB/ 0RB Offset    |
|                          |                       |                          |                   |                      |                    | 75RB/ 0RB&100RB/ 0RB Offset  |
|                          |                       | 20828 to 21179           | High              | 15MHz+20MHz          | QPSK, 16QAM, 64QAM | 1RB/ 0RB&1RB/ 99RB Offset    |
|                          |                       |                          |                   |                      |                    | 1RB/ 74RB&1RB/ 0RB Offset    |
|                          |                       |                          |                   |                      |                    | 75RB/ 0RB&100RB/ 0RB Offset  |
|                          |                       | 20850 to 21251           | Low               | 20MHz+10MHz          | QPSK, 16QAM, 64QAM | 1RB/ 0RB&1RB/ 49RB Offset    |
|                          |                       |                          |                   |                      |                    | 1RB/ 99RB&1RB/ 0RB Offset    |
|                          |                       |                          |                   |                      |                    | 100RB/ 0RB&50RB/ 0RB Offset  |
|                          |                       | 20850 to 21251           | High              | 20MHz+10MHz          | QPSK, 16QAM, 64QAM | 1RB/ 0RB&1RB/ 49RB Offset    |
|                          |                       |                          |                   |                      |                    | 1RB/ 99RB&1RB/ 0RB Offset    |
|                          |                       |                          |                   |                      |                    | 100RB/ 0RB&50RB/ 0RB Offset  |
|                          |                       | 20850 to 21201           | Low               | 20MHz+15MHz          | QPSK, 16QAM, 64QAM | 1RB/ 0RB&1RB/ 74RB Offset    |
|                          |                       |                          |                   |                      |                    | 1RB/ 99RB&1RB/ 0RB Offset    |

|   |                    |                |                   |             |                    |                              |
|---|--------------------|----------------|-------------------|-------------|--------------------|------------------------------|
|   |                    |                | High              | 20MHz+15MHz | QPSK, 16QAM, 64QAM | 100RB/ 0RB&75RB/ 0RB Offset  |
|   |                    |                |                   |             |                    | 1RB/ 0RB&1RB/ 74RB Offset    |
|   |                    |                |                   |             |                    | 1RB/ 99RB&1RB/ 0RB Offset    |
|   |                    | 20850 to 21152 | Low               | 20MHz+20MHz | QPSK, 16QAM, 64QAM | 100RB/ 0RB&75RB/ 0RB Offset  |
|   |                    |                |                   |             |                    | 1RB/ 0RB&1RB/ 99RB Offset    |
|   |                    |                |                   |             |                    | 1RB/ 99RB&1RB/ 0RB Offset    |
|   |                    |                | High              | 20MHz+20MHz | QPSK, 16QAM, 64QAM | 100RB/ 0RB&100RB/ 0RB Offset |
|   |                    |                |                   |             |                    | 1RB/ 0RB&1RB/ 99RB Offset    |
|   |                    |                |                   |             |                    | 1RB/ 99RB&1RB/ 0RB Offset    |
|   |                    |                |                   |             |                    | 100RB/ 0RB&100RB/ 0RB Offset |
| B | CONDUCTED EMISSION | 20805 to 21206 | Low, Middle, High | 10MHz+20MHz | QPSK               | 1RB/ 0RB&1RB/ 99RB Offset    |
|   |                    |                |                   |             |                    | 1RB/ 49RB&1RB/ 0RB Offset    |
|   |                    |                |                   |             |                    | 50RB/ 0RB&100RB/ 0RB Offset  |
|   |                    | 20825 to 21277 | Low, Middle, High | 15MHz+10MHz | QPSK               | 1RB/ 0RB&1RB/ 49RB Offset    |
|   |                    |                |                   |             |                    | 1RB/ 74RB&1RB/ 0RB Offset    |
|   |                    |                |                   |             |                    | 75RB/ 0RB&50RB/ 0RB Offset   |
|   |                    | 20825 to 21225 | Low, Middle, High | 15MHz+15MHz | QPSK               | 1RB/ 0RB&1RB/ 74RB Offset    |
|   |                    |                |                   |             |                    | 1RB/ 74RB&1RB/ 0RB Offset    |
|   |                    |                |                   |             |                    | 75RB/ 0RB&75RB/ 0RB Offset   |
|   |                    | 20828 to 21179 | Low, Middle, High | 15MHz+20MHz | QPSK               | 1RB/ 0RB&1RB/ 99RB Offset    |
|   |                    |                |                   |             |                    | 1RB/ 74RB&1RB/ 0RB Offset    |
|   |                    |                |                   |             |                    | 75RB/ 0RB&100RB/ 0RB Offset  |
|   |                    | 20850 to 21251 | Low, Middle, High | 20MHz+10MHz | QPSK               | 1RB/ 0RB&1RB/ 49RB Offset    |
|   |                    |                |                   |             |                    | 1RB/ 99RB&1RB/ 0RB Offset    |
|   |                    |                |                   |             |                    | 100RB/ 0RB&50RB/ 0RB Offset  |
|   |                    | 20850 to 21201 | Low, Middle, High | 20MHz+15MHz | QPSK               | 1RB/ 0RB&1RB/ 74RB Offset    |
|   |                    |                |                   |             |                    | 1RB/ 99RB&1RB/ 0RB Offset    |
|   |                    |                |                   |             |                    | 100RB/ 0RB&75RB/ 0RB Offset  |
|   |                    | 20850 to 21152 | Low, Middle, High | 20MHz+20MHz | QPSK               | 1RB/ 0RB&1RB/ 99RB Offset    |
|   |                    |                |                   |             |                    | 1RB/ 99RB&1RB/ 0RB Offset    |
|   |                    |                |                   |             |                    | 100RB/ 0RB&100RB/ 0RB Offset |
| A | RADIATED EMISSION  | 20805 to 21206 | Low, Middle, High | 10MHz+20MHz | QPSK               | 1RB/ 49RB&1RB/ 0RB Offset    |
|   |                    | 20825 to 21277 | Low, Middle, High | 15MHz+10MHz | QPSK               | 1RB/ 74RB&1RB/ 0RB Offset    |
|   |                    | 20825 to 21225 | Low, Middle, High | 15MHz+15MHz | QPSK               | 1RB/ 74RB&1RB/ 0RB Offset    |
|   |                    | 20828 to 21179 | Low, Middle, High | 15MHz+20MHz | QPSK               | 1RB/ 74RB&1RB/ 0RB Offset    |
|   |                    | 20850 to 21251 | Low, Middle, High | 20MHz+10MHz | QPSK               | 1RB/ 99RB&1RB/ 0RB Offset    |
|   |                    | 20850 to 21201 | Low, Middle, High | 20MHz+15MHz | QPSK               | 1RB/ 99RB&1RB/ 0RB Offset    |
|   |                    | 20850 to 21152 | Low, Middle, High | 20MHz+20MHz | QPSK               | 1RB/ 99RB&1RB/ 0RB Offset    |

**Note:** This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.

**LTE BAND 38 MODE**

| EUT<br>CONFIGURE<br>MODE | TEST ITEM                   | AVAILABLE<br>CHANNEL | TESTED CHANNEL      | CHANNEL<br>BANDWIDTH | MODULATION         | MODE                 |
|--------------------------|-----------------------------|----------------------|---------------------|----------------------|--------------------|----------------------|
| B                        | EIRP                        | 37775 to 38225       | 37775, 38000, 38225 | 5MHz                 | QPSK, 16QAM, 64QAM | 1 RB / 0 RB Offset   |
|                          |                             | 37800 to 38200       | 37800, 38000, 38200 | 10MHz                | QPSK, 16QAM, 64QAM | 1 RB / 0RB Offset    |
|                          |                             | 37825 to 38175       | 37825, 38000, 38175 | 15MHz                | QPSK, 16QAM, 64QAM | 1 RB / 0 RB Offset   |
|                          |                             | 37850 to 38150       | 37850, 38000, 38150 | 20MHz                | QPSK, 16QAM, 64QAM | 1 RB / 0 RB Offset   |
| B                        | FREQUENCY<br>STABILITY      | 37775 to 38225       | 37775, 38225        | 5MHz                 | QPSK               | 1 RB / 0 RB Offset   |
|                          |                             | 37800 to 38200       | 37800, 38200        | 10MHz                | QPSK               | 1 RB / 0RB Offset    |
|                          |                             | 37825 to 38175       | 37825, 38175        | 15MHz                | QPSK               | 1 RB / 0 RB Offset   |
|                          |                             | 37850 to 38150       | 37850, 38150        | 20MHz                | QPSK               | 1 RB / 0 RB Offset   |
| B                        | OCCUPIED<br>BANDWIDTH       | 37775 to 38225       | 37775, 38000, 38225 | 5MHz                 | QPSK, 16QAM, 64QAM | 25 RB / 0 RB Offset  |
|                          |                             | 37800 to 38200       | 37800, 38000, 38200 | 10MHz                | QPSK, 16QAM, 64QAM | 50 RB / 0 RB Offset  |
|                          |                             | 37825 to 38175       | 37825, 38000, 38175 | 15MHz                | QPSK, 16QAM, 64QAM | 75 RB / 0 RB Offset  |
|                          |                             | 37850 to 38150       | 37850, 38000, 38150 | 20MHz                | QPSK, 16QAM, 64QAM | 100 RB / 0 RB Offset |
| B                        | BAND EDGE                   | 37775 to 38225       | 37775               | 5MHz                 | QPSK, 16QAM, 64QAM | 1 RB / 0 RB Offset   |
|                          |                             |                      | 38825               | 5MHz                 | QPSK, 16QAM, 64QAM | 25 RB / 0 RB Offset  |
|                          |                             | 37800 to 38200       | 37800               | 10MHz                | QPSK, 16QAM, 64QAM | 1 RB / 24 RB Offset  |
|                          |                             |                      | 38200               | 10MHz                | QPSK, 16QAM, 64QAM | 25 RB / 0 RB Offset  |
|                          |                             | 37825 to 38175       | 37825               | 15MHz                | QPSK, 16QAM, 64QAM | 1 RB / 0 RB Offset   |
|                          |                             |                      | 38175               | 15MHz                | QPSK, 16QAM, 64QAM | 1 RB / 0 RB Offset   |
|                          |                             | 37850 to 38150       | 37850               | 20MHz                | QPSK, 16QAM, 64QAM | 1 RB / 49 RB Offset  |
|                          |                             |                      | 38150               | 20MHz                | QPSK, 16QAM, 64QAM | 50 RB / 0 RB Offset  |
|                          |                             | 37825 to 38175       | 37825               | 15MHz                | QPSK, 16QAM, 64QAM | 1 RB / 0 RB Offset   |
|                          |                             |                      | 38175               | 15MHz                | QPSK, 16QAM, 64QAM | 75 RB / 0 RB Offset  |
|                          |                             | 37850 to 38150       | 37850               | 20MHz                | QPSK, 16QAM, 64QAM | 1 RB / 74 RB Offset  |
|                          |                             |                      | 38150               | 20MHz                | QPSK, 16QAM, 64QAM | 75 RB / 0 RB Offset  |
| B                        | CONDCUDE<br>TED<br>EMISSION | 37775 to 38225       | 37775, 38000, 38225 | 5MHz                 | QPSK               | 1 RB / 0 RB Offset   |
|                          |                             | 37800 to 38200       | 37800, 38000, 38200 | 10MHz                | QPSK               | 1 RB / 0RB Offset    |
|                          |                             | 37825 to 38175       | 37825, 38000, 38175 | 15MHz                | QPSK               | 1 RB / 0 RB Offset   |
|                          |                             | 37850 to 38150       | 37850, 38000, 38150 | 20MHz                | QPSK               | 1 RB / 0 RB Offset   |
| A                        | RADIATED<br>EMISSION        | 37775 to 38225       | 38000               | 5MHz                 | QPSK               | 1 RB / 0 RB Offset   |
|                          |                             | 37800 to 38200       | 37800, 38000, 38200 | 10MHz                | QPSK               | 1 RB / 0RB Offset    |
|                          |                             | 37825 to 38175       | 38000               | 15MHz                | QPSK               | 1 RB / 0 RB Offset   |
|                          |                             | 37850 to 38150       | 38000               | 20MHz                | QPSK               | 1 RB / 0 RB Offset   |

**Note:** This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.

**LTE BAND 41 MODE**

| TEST ITEM             | AVAILABLE CHANNEL | TESTED CHANNEL      | CHANNEL BANDWIDTH | MODULATION         | MODE                 |
|-----------------------|-------------------|---------------------|-------------------|--------------------|----------------------|
| EIRP                  | 39675 to 41565    | 39675, 40620, 41565 | 5MHz              | QPSK, 16QAM, 64QAM | 1 RB / 0 RB Offset   |
|                       | 39700 to 41540    | 39700, 40620, 41540 | 10MHz             | QPSK, 16QAM, 64QAM | 1 RB / 0RB Offset    |
|                       | 39725 to 41515    | 39725, 40620, 41515 | 15MHz             | QPSK, 16QAM, 64QAM | 1 RB / 0 RB Offset   |
|                       | 39750 to 41490    | 39750, 40620, 41490 | 20MHz             | QPSK, 16QAM, 64QAM | 1 RB / 0 RB Offset   |
| FREQUENCY STABILITY   | 39675 to 41565    | 39675, 41565        | 5MHz              | QPSK               | 1 RB / 0 RB Offset   |
|                       | 39700 to 41540    | 39700, 41540        | 10MHz             | QPSK               | 1 RB / 0RB Offset    |
|                       | 39725 to 41515    | 39725, 41515        | 15MHz             | QPSK               | 1 RB / 0 RB Offset   |
|                       | 39750 to 41490    | 39750, 41490        | 20MHz             | QPSK               | 1 RB / 0 RB Offset   |
| OCCUPIED BANDWIDTH    | 39675 to 41565    | 39675, 40620, 41565 | 5MHz              | QPSK, 16QAM, 64QAM | 25 RB / 0 RB Offset  |
|                       | 39700 to 41540    | 39700, 40620, 41540 | 10MHz             | QPSK, 16QAM, 64QAM | 50 RB / 0 RB Offset  |
|                       | 39725 to 41515    | 39725, 40620, 41515 | 15MHz             | QPSK, 16QAM, 64QAM | 75 RB / 0 RB Offset  |
|                       | 39750 to 41490    | 39750, 40620, 41490 | 20MHz             | QPSK, 16QAM, 64QAM | 100 RB / 0 RB Offset |
| BAND EDGE             | 39675 to 41565    | 39675               | 5MHz              | QPSK, 16QAM, 64QAM | 1 RB / 0 RB Offset   |
|                       |                   |                     |                   |                    | 25 RB / 0 RB Offset  |
|                       |                   | 41565               | 5MHz              | QPSK, 16QAM, 64QAM | 1 RB / 24 RB Offset  |
|                       |                   |                     |                   |                    | 25 RB / 0 RB Offset  |
|                       | 39700 to 41540    | 39700               | 10MHz             | QPSK, 16QAM, 64QAM | 1 RB / 0 RB Offset   |
|                       |                   |                     |                   |                    | 50 RB / 0 RB Offset  |
|                       |                   | 41540               | 10MHz             | QPSK, 16QAM, 64QAM | 1 RB / 49 RB Offset  |
|                       |                   |                     |                   |                    | 50 RB / 0 RB Offset  |
|                       | 39725 to 41515    | 39725               | 15MHz             | QPSK, 16QAM, 64QAM | 1 RB / 0 RB Offset   |
|                       |                   |                     |                   |                    | 75 RB / 0 RB Offset  |
|                       |                   | 41515               | 15MHz             | QPSK, 16QAM, 64QAM | 1 RB / 74 RB Offset  |
|                       |                   |                     |                   |                    | 75 RB / 0 RB Offset  |
|                       | 39750 to 41490    | 39750               | 20MHz             | QPSK, 16QAM, 64QAM | 1 RB / 0 RB Offset   |
|                       |                   |                     |                   |                    | 100 RB / 0 RB Offset |
| CONDCUDETE D EMISSION | 39675 to 41565    | 39675, 40620, 41565 | 5MHz              | QPSK               | 1 RB / 0 RB Offset   |
|                       | 39700 to 41540    | 39700, 40620, 41540 | 10MHz             | QPSK               | 1 RB / 0RB Offset    |
|                       | 39725 to 41515    | 39725, 40620, 41515 | 15MHz             | QPSK               | 1 RB / 0 RB Offset   |
|                       | 39750 to 41490    | 39750, 40620, 41490 | 20MHz             | QPSK               | 1 RB / 0 RB Offset   |
| RADIATED EMISSION     | 39675 to 41565    | 40620               | 5MHz              | QPSK               | 1 RB / 0 RB Offset   |
|                       | 39700 to 41540    | 39700, 40620, 41540 | 10MHz             | QPSK               | 1 RB / 0RB Offset    |
|                       | 39725 to 41515    | 40620               | 15MHz             | QPSK               | 1 RB / 0 RB Offset   |
|                       | 39750 to 41490    | 40620               | 20MHz             | QPSK               | 1 RB / 0 RB Offset   |

**Note:** This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.

**TEST CONDITION:**

| TEST ITEM           | ENVIRONMENTAL CONDITIONS | INPUT POWER         | TESTED BY  |
|---------------------|--------------------------|---------------------|------------|
| ERP                 | 23deg. C, 70%RH          | DC 3.85V By Battery | Jace Hu    |
| FREQUENCY STABILITY | 23deg. C, 70%RH          | DC 3.85V By Battery | Chase Zhou |
| OCCUPIED BANDWIDTH  | 23deg. C, 70%RH          | DC 3.85V By Battery | Chase Zhou |
| BAND EDGE           | 23deg. C, 70%RH          | DC 3.85V By Battery | Chase Zhou |
| CONDCUDED EMISSION  | 23deg. C, 70%RH          | DC 3.85V By Battery | Chase Zhou |
| RADIATED EMISSION   | 23deg. C, 70%RH          | DC 3.85V By Battery | Jace Hu    |



Test Report No.: W7L-P21080009RF17

## 2.5 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a RF product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

**FCC 47 CFR Part 2**

**FCC 47 CFR Part 27**

**KDB 971168 D01 Power Meas License Digital Systems v03r01**

**ANSI/TIA/EIA-603-D**

**ANSI/TIA/EIA-603-E**

**ANSI C63.26-2015**

**NOTE:** All test items have been performed and recorded as per the above standards.

### 3 TEST TYPES AND RESULTS

#### 3.1 OUTPUT POWER MEASUREMENT

##### 3.1.1 LIMITS OF OUTPUT POWER MEASUREMENT

The radiated peak output power shall be according to the specific rule Part 27.50(h)(2) that “User stations are limited to 2 watts” and 27.50(i) specific that “Peak transmit power must be measure over any interval of continuous transmission using instrumentation calibration in terms of rms-equivalent voltage.”

Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP

##### 3.1.2 TEST PROCEDURES

###### EIRP MEASUREMENT:

Per KDB 971168 D01 Power Meas License Digital Systems v03r01 or subclause 5.2.5.5 of ANSI C63.26-2015, the relevant equation for determining the ERP or EIRP from the conducted RF output power measured using the guidance provided above is:

$$\text{ERP or EIRP} = P_{\text{Meas}} + G_{\text{T}} - L_{\text{C}}$$

Where:

ERP or EIRP = effective radiated power or equivalent isotropically radiated power, respectively

(expressed in the same units as  $P_{\text{Meas}}$ , typically dBW or dBm);

$P_{\text{Meas}}$  = measured transmitter output power or PSD, in dBm or dBW;

$G_{\text{T}}$  = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);

$L_{\text{C}}$  = signal attenuation in the connecting cable between the transmitter and antenna, in dB.

###### CONDUCTED POWER MEASUREMENT:

- The EUT was set up for the maximum power with LTE link data modulation and link up with simulator.
- Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.



Test Report No.: W7L-P21080009RF17

### 3.1.3 TEST SETUP

#### CONDUCTED POWER MEASUREMENT:



For the actual test configuration, please refer to the attached file (Test Setup Photo).

### 3.1.4 TEST RESULTS

#### AVERAGE CONDUCTED OUTPUT POWER (dBm)

| Band               | WCDMA IV |        |        |
|--------------------|----------|--------|--------|
| Channel            | 1312     | 1413   | 1513   |
| Frequency (MHz)    | 1712.4   | 1732.6 | 1752.6 |
| RMC 12.2K          | 21.41    | 21.45  | 21.38  |
| HSDPA Subtest-1    | 20.43    | 20.46  | 20.34  |
| HSDPA Subtest-2    | 20.41    | 20.45  | 20.33  |
| HSDPA Subtest-3    | 19.91    | 19.91  | 19.81  |
| HSDPA Subtest-4    | 19.88    | 19.89  | 19.80  |
| DC-HSDPA Subtest-1 | 20.47    | 20.56  | 20.24  |
| DC-HSDPA Subtest-2 | 20.45    | 20.46  | 20.26  |
| DC-HSDPA Subtest-3 | 19.91    | 20.07  | 19.75  |
| DC-HSDPA Subtest-4 | 19.98    | 19.94  | 19.78  |
| HSUPA Subtest-1    | 20.43    | 20.56  | 20.27  |
| HSUPA Subtest-2    | 18.43    | 18.50  | 18.33  |
| HSUPA Subtest-3    | 19.51    | 19.50  | 19.24  |
| HSUPA Subtest-4    | 18.45    | 18.59  | 18.32  |
| HSUPA Subtest-5    | 20.49    | 20.59  | 20.24  |

LTE Band 7

| Band/BW | Modulation | RB Size | RB Offset | Low CH<br>20775         | Mid CH<br>21100       | High CH<br>21425        | MPR |
|---------|------------|---------|-----------|-------------------------|-----------------------|-------------------------|-----|
|         |            |         |           | Frequency<br>2502.5 MHz | Frequency<br>2535 MHz | Frequency<br>2567.5 MHz |     |
| 7/5     | QPSK       | 1       | 0         | 21.45                   | 21.73                 | 21.50                   | 0   |
|         |            | 1       | 12        | 21.33                   | 21.61                 | 21.43                   | 0   |
|         |            | 1       | 24        | 21.38                   | 21.69                 | 21.52                   | 0   |
|         |            | 12      | 0         | 20.32                   | 20.65                 | 20.48                   | 1   |
|         |            | 12      | 6         | 20.28                   | 20.67                 | 20.39                   | 1   |
|         |            | 12      | 13        | 20.26                   | 20.59                 | 20.47                   | 1   |
|         |            | 25      | 0         | 20.30                   | 20.64                 | 20.41                   | 1   |
|         | 16QAM      | 1       | 0         | 20.71                   | 21.08                 | 20.85                   | 1   |
|         |            | 1       | 12        | 20.53                   | 20.91                 | 20.70                   | 1   |
|         |            | 1       | 24        | 20.68                   | 20.99                 | 20.83                   | 1   |
|         |            | 12      | 0         | 19.29                   | 19.58                 | 19.42                   | 2   |
|         |            | 12      | 6         | 19.22                   | 19.63                 | 19.37                   | 2   |
|         |            | 12      | 13        | 19.28                   | 19.60                 | 19.46                   | 2   |
|         |            | 25      | 0         | 19.30                   | 19.58                 | 19.36                   | 2   |
|         | 64QAM      | 1       | 0         | 19.56                   | 19.94                 | 19.75                   | 2   |
|         |            | 1       | 12        | 19.42                   | 19.76                 | 19.53                   | 2   |
|         |            | 1       | 24        | 19.51                   | 19.89                 | 19.73                   | 2   |
|         |            | 12      | 0         | 18.30                   | 18.61                 | 18.31                   | 3   |
|         |            | 12      | 6         | 18.24                   | 18.63                 | 18.43                   | 3   |
|         |            | 12      | 13        | 18.32                   | 18.65                 | 18.38                   | 3   |
|         |            | 25      | 0         | 18.27                   | 18.58                 | 18.43                   | 3   |

| Band/BW | Modulation | RB<br>Size | RB<br>Offset | Low CH 20800          | Mid CH 21100          | High CH 21400         | MPR |
|---------|------------|------------|--------------|-----------------------|-----------------------|-----------------------|-----|
|         |            |            |              | Frequency<br>2505 MHz | Frequency<br>2535 MHz | Frequency<br>2565 MHz |     |
| 7/ 10   | QPSK       | 1          | 0            | 21.42                 | 21.76                 | 21.50                 | 0   |
|         |            | 1          | 24           | 21.33                 | 21.61                 | 21.44                 | 0   |
|         |            | 1          | 49           | 21.35                 | 21.73                 | 21.48                 | 0   |
|         |            | 25         | 0            | 20.33                 | 20.64                 | 20.51                 | 1   |
|         |            | 25         | 12           | 20.34                 | 20.61                 | 20.39                 | 1   |
|         |            | 25         | 25           | 20.24                 | 20.56                 | 20.46                 | 1   |
|         |            | 50         | 0            | 20.35                 | 20.64                 | 20.38                 | 1   |
|         | 16QAM      | 1          | 0            | 20.71                 | 21.05                 | 20.81                 | 1   |
|         |            | 1          | 24           | 20.58                 | 20.87                 | 20.73                 | 1   |
|         |            | 1          | 49           | 20.68                 | 21.00                 | 20.80                 | 1   |
|         |            | 25         | 0            | 19.31                 | 19.56                 | 19.48                 | 2   |
|         |            | 25         | 12           | 19.26                 | 19.57                 | 19.42                 | 2   |
|         |            | 25         | 25           | 19.27                 | 19.61                 | 19.43                 | 2   |
|         |            | 50         | 0            | 19.34                 | 19.57                 | 19.40                 | 2   |
|         | 64QAM      | 1          | 0            | 19.55                 | 19.95                 | 19.72                 | 2   |
|         |            | 1          | 24           | 19.47                 | 19.72                 | 19.57                 | 2   |
|         |            | 1          | 49           | 19.57                 | 19.83                 | 19.70                 | 2   |
|         |            | 25         | 0            | 18.28                 | 18.58                 | 18.37                 | 3   |
|         |            | 25         | 12           | 18.31                 | 18.62                 | 18.37                 | 3   |
|         |            | 25         | 25           | 18.31                 | 18.62                 | 18.40                 | 3   |
|         |            | 50         | 0            | 18.32                 | 18.54                 | 18.44                 | 3   |

| Band/BW | Modulation | RB<br>Size | RB<br>Offset | Low CH 20825            | Mid CH 21100          | High CH 21375           | MPR |
|---------|------------|------------|--------------|-------------------------|-----------------------|-------------------------|-----|
|         |            |            |              | Frequency<br>2507.5 MHz | Frequency<br>2535 MHz | Frequency<br>2562.5 MHz |     |
| 7/ 15   | QPSK       | 1          | 0            | 21.49                   | 21.76                 | 21.47                   | 0   |
|         |            | 1          | 37           | 21.31                   | 21.66                 | 21.39                   | 0   |
|         |            | 1          | 74           | 21.41                   | 21.76                 | 21.49                   | 0   |
|         |            | 36         | 0            | 20.30                   | 20.65                 | 20.52                   | 1   |
|         |            | 36         | 19           | 20.35                   | 20.66                 | 20.39                   | 1   |
|         |            | 36         | 39           | 20.22                   | 20.57                 | 20.46                   | 1   |
|         |            | 75         | 0            | 20.35                   | 20.62                 | 20.43                   | 1   |
|         | 16QAM      | 1          | 0            | 20.75                   | 21.12                 | 20.81                   | 1   |
|         |            | 1          | 37           | 20.57                   | 20.88                 | 20.73                   | 1   |
|         |            | 1          | 74           | 20.64                   | 21.05                 | 20.82                   | 1   |
|         |            | 36         | 0            | 19.35                   | 19.56                 | 19.49                   | 2   |
|         |            | 36         | 19           | 19.20                   | 19.61                 | 19.38                   | 2   |
|         |            | 36         | 39           | 19.32                   | 19.59                 | 19.46                   | 2   |
|         |            | 75         | 0            | 19.35                   | 19.60                 | 19.33                   | 2   |
|         | 64QAM      | 1          | 0            | 19.57                   | 19.96                 | 19.73                   | 2   |
|         |            | 1          | 37           | 19.48                   | 19.71                 | 19.54                   | 2   |
|         |            | 1          | 74           | 19.53                   | 19.82                 | 19.73                   | 2   |
|         |            | 36         | 0            | 18.33                   | 18.64                 | 18.31                   | 3   |
|         |            | 36         | 19           | 18.25                   | 18.56                 | 18.39                   | 3   |
|         |            | 36         | 39           | 18.34                   | 18.69                 | 18.42                   | 3   |
|         |            | 75         | 0            | 18.31                   | 18.52                 | 18.45                   | 3   |

| Band/BW | Modulation | RB<br>Size | RB<br>Offset | Low CH 20850          | Mid CH 21100          | High CH 21350         | MPR |
|---------|------------|------------|--------------|-----------------------|-----------------------|-----------------------|-----|
|         |            |            |              | Frequency<br>2510 MHz | Frequency<br>2535 MHz | Frequency<br>2560 MHz |     |
| 7/ 20   | QPSK       | 1          | 0            | 21.50                 | 21.80                 | 21.55                 | 0   |
|         |            | 1          | 50           | 21.35                 | 21.69                 | 21.45                 | 0   |
|         |            | 1          | 99           | 21.43                 | 21.77                 | 21.53                 | 0   |
|         |            | 50         | 0            | 20.36                 | 20.70                 | 20.53                 | 1   |
|         |            | 50         | 25           | 20.36                 | 20.68                 | 20.44                 | 1   |
|         |            | 50         | 50           | 20.30                 | 20.64                 | 20.48                 | 1   |
|         |            | 100        | 0            | 20.36                 | 20.66                 | 20.46                 | 1   |
|         | 16QAM      | 1          | 0            | 20.78                 | 21.13                 | 20.87                 | 1   |
|         |            | 1          | 50           | 20.61                 | 20.93                 | 20.75                 | 1   |
|         |            | 1          | 99           | 20.70                 | 21.07                 | 20.85                 | 1   |
|         |            | 50         | 0            | 19.37                 | 19.64                 | 19.50                 | 2   |
|         |            | 50         | 25           | 19.28                 | 19.65                 | 19.43                 | 2   |
|         |            | 50         | 50           | 19.35                 | 19.65                 | 19.48                 | 2   |
|         |            | 100        | 0            | 19.36                 | 19.65                 | 19.41                 | 2   |
|         | 64QAM      | 1          | 0            | 19.63                 | 19.99                 | 19.77                 | 2   |
|         |            | 1          | 50           | 19.50                 | 19.78                 | 19.59                 | 2   |
|         |            | 1          | 99           | 19.59                 | 19.90                 | 19.75                 | 2   |
|         |            | 50         | 0            | 18.34                 | 18.66                 | 18.39                 | 3   |
|         |            | 50         | 25           | 18.32                 | 18.64                 | 18.45                 | 3   |
|         |            | 50         | 50           | 18.36                 | 18.70                 | 18.46                 | 3   |
|         |            | 100        | 0            | 18.33                 | 18.60                 | 18.46                 | 3   |



**BUREAU  
VERITAS**

Test Report No.: W7L-P21080009RF17

LTE Band CA\_7C

| CA_7C                                |         |            |         |           |         |           |               |                      |
|--------------------------------------|---------|------------|---------|-----------|---------|-----------|---------------|----------------------|
| Combination 10MHz+20MHz (50RB+100RB) |         |            |         |           |         |           |               |                      |
| PCC                                  | SCC     | Modulation | PCC     |           | SCC     |           | Total RB Size | Measured Power (dBm) |
| Channel                              | Channel |            | RB Size | RB offset | RB Size | RB offset |               |                      |
| 20805                                | 20949   | QPSK       | 1       | 99        | 1       | 0         | 2             | 20.91                |
|                                      |         | 16QAM      | 1       | 99        | 1       | 0         | 2             | 20.70                |
|                                      |         | 64QAM      | 1       | 99        | 1       | 0         | 2             | 19.74                |
| 21006                                | 21150   | QPSK       | 1       | 99        | 1       | 0         | 2             | 21.18                |
|                                      |         | 16QAM      | 1       | 99        | 1       | 0         | 2             | 20.81                |
|                                      |         | 64QAM      | 1       | 99        | 1       | 0         | 2             | 19.84                |
| 21206                                | 21350   | QPSK       | 1       | 99        | 1       | 0         | 2             | 21.44                |
|                                      |         | 16QAM      | 1       | 99        | 1       | 0         | 2             | 20.98                |
|                                      |         | 64QAM      | 1       | 99        | 1       | 0         | 2             | 19.72                |
| Combination 15MHz+10MHz (75RB+50RB)  |         |            |         |           |         |           |               |                      |
| PCC                                  | SCC     | Modulation | PCC     |           | SCC     |           | Total RB Size | Measured Power (dBm) |
| Channel                              | Channel |            | RB Size | RB offset | RB Size | RB offset |               |                      |
| 20825                                | 20975   | QPSK       | 1       | 74        | 1       | 0         | 2             | 21.41                |
|                                      |         | 16QAM      | 1       | 74        | 1       | 0         | 2             | 20.57                |
|                                      |         | 64QAM      | 1       | 74        | 1       | 0         | 2             | 19.69                |
| 21051                                | 21171   | QPSK       | 1       | 74        | 1       | 0         | 2             | 21.23                |
|                                      |         | 16QAM      | 1       | 74        | 1       | 0         | 2             | 20.34                |
|                                      |         | 64QAM      | 1       | 74        | 1       | 0         | 2             | 19.42                |
| 21277                                | 21397   | QPSK       | 1       | 74        | 1       | 0         | 2             | 21.51                |
|                                      |         | 16QAM      | 1       | 74        | 1       | 0         | 2             | 20.87                |
|                                      |         | 64QAM      | 1       | 74        | 1       | 0         | 2             | 19.84                |

| CA_7C                                |         |            |         |           |         |           |               |                      |
|--------------------------------------|---------|------------|---------|-----------|---------|-----------|---------------|----------------------|
| Combination 15MHz+15MHz (75RB+75RB)  |         |            |         |           |         |           |               |                      |
| PCC                                  | SCC     | Modulation | PCC     |           | SCC     |           | Total RB Size | Measured Power (dBm) |
| Channel                              | Channel |            | RB Size | RB offset | RB Size | RB offset |               |                      |
| 20825                                | 20975   | QPSK       | 1       | 74        | 1       | 0         | 2             | 20.97                |
|                                      |         | 16QAM      | 1       | 74        | 1       | 0         | 2             | 20.85                |
|                                      |         | 64QAM      | 1       | 74        | 1       | 0         | 2             | 19.62                |
| 21025                                | 21175   | QPSK       | 1       | 74        | 1       | 0         | 2             | 20.70                |
|                                      |         | 16QAM      | 1       | 74        | 1       | 0         | 2             | 20.55                |
|                                      |         | 64QAM      | 1       | 74        | 1       | 0         | 2             | 19.23                |
| 21225                                | 21375   | QPSK       | 1       | 74        | 1       | 0         | 2             | 21.44                |
|                                      |         | 16QAM      | 1       | 74        | 1       | 0         | 2             | 20.62                |
|                                      |         | 64QAM      | 1       | 74        | 1       | 0         | 2             | 19.95                |
| Combination 15MHz+20MHz (75RB+100RB) |         |            |         |           |         |           |               |                      |
| PCC                                  | SCC     | Modulation | PCC     |           | SCC     |           | Total RB Size | Measured Power (dBm) |
| Channel                              | Channel |            | RB Size | RB offset | RB Size | RB offset |               |                      |
| 20828                                | 20999   | QPSK       | 1       | 74        | 1       | 0         | 2             | 21.43                |
|                                      |         | 16QAM      | 1       | 74        | 1       | 0         | 2             | 20.86                |
|                                      |         | 64QAM      | 1       | 74        | 1       | 0         | 2             | 19.74                |
| 21003                                | 21174   | QPSK       | 1       | 74        | 1       | 0         | 2             | 21.20                |
|                                      |         | 16QAM      | 1       | 74        | 1       | 0         | 2             | 20.82                |
|                                      |         | 64QAM      | 1       | 74        | 1       | 0         | 2             | 19.48                |
| 21179                                | 21350   | QPSK       | 1       | 74        | 1       | 0         | 2             | 21.11                |
|                                      |         | 16QAM      | 1       | 74        | 1       | 0         | 2             | 20.93                |
|                                      |         | 64QAM      | 1       | 74        | 1       | 0         | 2             | 19.55                |

| CA_7C                                |         |            |         |           |         |           |               |                      |
|--------------------------------------|---------|------------|---------|-----------|---------|-----------|---------------|----------------------|
| Combination 20MHz+10MHz (100RB+50RB) |         |            |         |           |         |           |               |                      |
| PCC                                  | SCC     | Modulation | PCC     |           | SCC     |           | Total RB Size | Measured Power (dBm) |
| Channel                              | Channel |            | RB Size | RB offset | RB Size | RB offset |               |                      |
| 20850                                | 20994   | QPSK       | 1       | 99        | 1       | 0         | 2             | 20.91                |
|                                      |         | 16QAM      | 1       | 99        | 1       | 0         | 2             | 20.70                |
|                                      |         | 64QAM      | 1       | 99        | 1       | 0         | 2             | 19.74                |
| 21051                                | 21195   | QPSK       | 1       | 99        | 1       | 0         | 2             | 21.18                |
|                                      |         | 16QAM      | 1       | 99        | 1       | 0         | 2             | 20.81                |
|                                      |         | 64QAM      | 1       | 99        | 1       | 0         | 2             | 19.84                |
| 21251                                | 21395   | QPSK       | 1       | 99        | 1       | 0         | 2             | 21.44                |
|                                      |         | 16QAM      | 1       | 99        | 1       | 0         | 2             | 20.98                |
|                                      |         | 64QAM      | 1       | 99        | 1       | 0         | 2             | 19.72                |
| Combination 20MHz+15MHz (100RB+75RB) |         |            |         |           |         |           |               |                      |
| PCC                                  | SCC     | Modulation | PCC     |           | SCC     |           | Total RB Size | Measured Power (dBm) |
| Channel                              | Channel |            | RB Size | RB offset | RB Size | RB offset |               |                      |
| 20850                                | 21021   | QPSK       | 1       | 99        | 1       | 0         | 2             | 20.79                |
|                                      |         | 16QAM      | 1       | 99        | 1       | 0         | 2             | 20.42                |
|                                      |         | 64QAM      | 1       | 99        | 1       | 0         | 2             | 19.74                |
| 21026                                | 21197   | QPSK       | 1       | 99        | 1       | 0         | 2             | 21.12                |
|                                      |         | 16QAM      | 1       | 99        | 1       | 0         | 2             | 20.86                |
|                                      |         | 64QAM      | 1       | 99        | 1       | 0         | 2             | 19.63                |
| 21201                                | 21372   | QPSK       | 1       | 99        | 1       | 0         | 2             | 21.50                |
|                                      |         | 16QAM      | 1       | 99        | 1       | 0         | 2             | 20.91                |
|                                      |         | 64QAM      | 1       | 99        | 1       | 0         | 2             | 19.77                |

| CA_7C                                 |             |            |         |           |         |           |               |                      |
|---------------------------------------|-------------|------------|---------|-----------|---------|-----------|---------------|----------------------|
| Combination 20MHz+20MHz (100RB+100RB) |             |            |         |           |         |           |               |                      |
| PCC Channel                           | SCC Channel | Modulation | PCC     |           | SCC     |           | Total RB Size | Measured Power (dBm) |
|                                       |             |            | RB Size | RB offset | RB Size | RB offset |               |                      |
| 20850                                 | 21048       | QPSK       | 1       | 0         | 1       | 99        | 1             | 11.61                |
|                                       |             |            | 1       | 0         | 0       | 0         | 1             | 19.28                |
|                                       |             |            | 1       | 99        | 1       | 0         | 2             | 21.45                |
|                                       |             | 16QAM      | 1       | 0         | 1       | 99        | 1             | 11.34                |
|                                       |             |            | 1       | 0         | 0       | 0         | 1             | 18.73                |
|                                       |             |            | 1       | 99        | 1       | 0         | 2             | 20.76                |
|                                       |             | 64QAM      | 1       | 0         | 1       | 99        | 1             | 11.02                |
|                                       |             |            | 1       | 0         | 0       | 0         | 1             | 18.47                |
|                                       |             |            | 1       | 99        | 1       | 0         | 2             | 19.79                |
| 21001                                 | 21199       | QPSK       | 1       | 0         | 1       | 99        | 1             | 11.63                |
|                                       |             |            | 1       | 0         | 0       | 0         | 1             | 19.17                |
|                                       |             |            | 1       | 99        | 1       | 0         | 2             | 21.07                |
|                                       |             | 16QAM      | 1       | 0         | 1       | 99        | 1             | 11.21                |
|                                       |             |            | 1       | 0         | 0       | 0         | 1             | 18.52                |
|                                       |             |            | 1       | 99        | 1       | 0         | 2             | 20.60                |
|                                       |             | 64QAM      | 1       | 0         | 1       | 99        | 1             | 10.83                |
|                                       |             |            | 1       | 0         | 0       | 0         | 1             | 18.17                |
|                                       |             |            | 1       | 99        | 1       | 0         | 2             | 19.51                |
| 21152                                 | 21350       | QPSK       | 1       | 0         | 1       | 99        | 1             | 11.68                |
|                                       |             |            | 1       | 0         | 0       | 0         | 1             | 19.21                |
|                                       |             |            | 1       | 99        | 1       | 0         | 2             | 21.64                |
|                                       |             | 16QAM      | 1       | 0         | 1       | 99        | 1             | 11.44                |
|                                       |             |            | 1       | 0         | 0       | 0         | 1             | 18.52                |
|                                       |             |            | 1       | 99        | 1       | 0         | 2             | 20.92                |
|                                       |             | 64QAM      | 1       | 0         | 1       | 99        | 1             | 10.98                |
|                                       |             |            | 1       | 0         | 0       | 0         | 1             | 18.03                |
|                                       |             |            | 1       | 99        | 1       | 0         | 2             | 19.87                |



**BUREAU  
VERITAS**

**Test Report No.: W7L-P21080009RF17**

**LTE Band 38**

| Band/BW | Modulation | RB Size | RB Offset | Low CH 37775         | Mid CH 38000       | High CH 38225       | MPR |
|---------|------------|---------|-----------|----------------------|--------------------|---------------------|-----|
|         |            |         |           | Frequency 2572.5 MHz | Frequency 2595 MHz | Frequency 2617.5MHz |     |
| 38/ 5   | QPSK       | 1       | 0         | 21.93                | 21.87              | 22.02               | 0   |
|         |            | 1       | 12        | 21.66                | 21.60              | 21.80               | 0   |
|         |            | 1       | 24        | 21.93                | 21.90              | 22.11               | 0   |
|         |            | 12      | 0         | 20.78                | 20.77              | 20.98               | 1   |
|         |            | 12      | 6         | 20.76                | 20.81              | 20.91               | 1   |
|         |            | 12      | 13        | 20.87                | 20.86              | 21.12               | 1   |
|         |            | 25      | 0         | 20.91                | 20.91              | 21.06               | 1   |
|         | 16QAM      | 1       | 0         | 20.92                | 20.95              | 21.10               | 1   |
|         |            | 1       | 12        | 20.73                | 20.77              | 20.94               | 1   |
|         |            | 1       | 24        | 21.08                | 21.05              | 21.27               | 1   |
|         |            | 12      | 0         | 19.91                | 19.86              | 20.08               | 2   |
|         |            | 12      | 6         | 19.82                | 19.89              | 20.01               | 2   |
|         |            | 12      | 13        | 19.94                | 19.92              | 20.16               | 2   |
|         |            | 25      | 0         | 19.88                | 19.82              | 19.98               | 2   |
|         | 64QAM      | 1       | 0         | 19.54                | 19.58              | 19.77               | 2   |
|         |            | 1       | 12        | 19.48                | 19.48              | 19.63               | 2   |
|         |            | 1       | 24        | 19.74                | 19.78              | 20.00               | 2   |
|         |            | 12      | 0         | 18.95                | 18.92              | 19.00               | 3   |
|         |            | 12      | 6         | 18.75                | 18.80              | 18.98               | 3   |
|         |            | 12      | 13        | 18.94                | 18.93              | 19.04               | 3   |
|         |            | 25      | 0         | 18.88                | 18.85              | 19.08               | 3   |

| Band/BW | Modulation | RB<br>Size | RB<br>Offset | Low CH 37800          | Mid CH 38000          | High CH 38200         | MPR |
|---------|------------|------------|--------------|-----------------------|-----------------------|-----------------------|-----|
|         |            |            |              | Frequency<br>2575 MHz | Frequency<br>2595 MHz | Frequency<br>2615 MHz |     |
| 38/ 10  | QPSK       | 1          | 0            | 21.90                 | 21.90                 | 22.02                 | 0   |
|         |            | 1          | 24           | 21.66                 | 21.60                 | 21.81                 | 0   |
|         |            | 1          | 49           | 21.90                 | 21.94                 | 22.07                 | 0   |
|         |            | 25         | 0            | 20.79                 | 20.76                 | 21.01                 | 1   |
|         |            | 25         | 12           | 20.82                 | 20.75                 | 20.91                 | 1   |
|         |            | 25         | 25           | 20.85                 | 20.83                 | 21.11                 | 1   |
|         |            | 50         | 0            | 20.96                 | 20.91                 | 21.03                 | 1   |
|         | 16QAM      | 1          | 0            | 20.92                 | 20.92                 | 21.06                 | 1   |
|         |            | 1          | 24           | 20.78                 | 20.73                 | 20.97                 | 1   |
|         |            | 1          | 49           | 21.08                 | 21.06                 | 21.24                 | 1   |
|         |            | 25         | 0            | 19.93                 | 19.84                 | 20.14                 | 2   |
|         |            | 25         | 12           | 19.86                 | 19.83                 | 20.06                 | 2   |
|         |            | 25         | 25           | 19.93                 | 19.93                 | 20.13                 | 2   |
|         |            | 50         | 0            | 19.92                 | 19.81                 | 20.02                 | 2   |
|         | 64QAM      | 1          | 0            | 19.53                 | 19.59                 | 19.74                 | 2   |
|         |            | 1          | 24           | 19.53                 | 19.44                 | 19.67                 | 2   |
|         |            | 1          | 49           | 19.80                 | 19.72                 | 19.97                 | 2   |
|         |            | 25         | 0            | 18.93                 | 18.89                 | 19.06                 | 3   |
|         |            | 25         | 12           | 18.82                 | 18.79                 | 18.92                 | 3   |
|         |            | 25         | 25           | 18.93                 | 18.90                 | 19.06                 | 3   |
|         |            | 50         | 0            | 18.93                 | 18.81                 | 19.09                 | 3   |

| Band/BW | Modulation | RB<br>Size | RB<br>Offset | Low CH 37825            | Mid CH 38000          | High CH<br>38175       | MPR |
|---------|------------|------------|--------------|-------------------------|-----------------------|------------------------|-----|
|         |            |            |              | Frequency<br>2577.5 MHz | Frequency<br>2595 MHz | Frequency<br>2612.5MHz |     |
| 38/ 15  | QPSK       | 1          | 0            | 21.97                   | 21.90                 | 21.99                  | 0   |
|         |            | 1          | 37           | 21.64                   | 21.65                 | 21.76                  | 0   |
|         |            | 1          | 74           | 21.96                   | 21.97                 | 22.08                  | 0   |
|         |            | 36         | 0            | 20.76                   | 20.77                 | 21.02                  | 1   |
|         |            | 36         | 19           | 20.83                   | 20.80                 | 20.91                  | 1   |
|         |            | 36         | 39           | 20.83                   | 20.84                 | 21.11                  | 1   |
|         |            | 75         | 0            | 20.96                   | 20.89                 | 21.08                  | 1   |
|         | 16QAM      | 1          | 0            | 20.96                   | 20.99                 | 21.06                  | 1   |
|         |            | 1          | 37           | 20.77                   | 20.74                 | 20.97                  | 1   |
|         |            | 1          | 74           | 21.04                   | 21.11                 | 21.26                  | 1   |
|         |            | 36         | 0            | 19.97                   | 19.84                 | 20.15                  | 2   |
|         |            | 36         | 19           | 19.80                   | 19.87                 | 20.02                  | 2   |
|         |            | 36         | 39           | 19.98                   | 19.91                 | 20.16                  | 2   |
|         |            | 75         | 0            | 19.93                   | 19.84                 | 19.95                  | 2   |
|         | 64QAM      | 1          | 0            | 19.55                   | 19.60                 | 19.75                  | 2   |
|         |            | 1          | 37           | 19.54                   | 19.43                 | 19.64                  | 2   |
|         |            | 1          | 74           | 19.76                   | 19.71                 | 20.00                  | 2   |
|         |            | 36         | 0            | 18.98                   | 18.95                 | 19.00                  | 3   |
|         |            | 36         | 19           | 18.76                   | 18.73                 | 18.94                  | 3   |
|         |            | 36         | 39           | 18.96                   | 18.97                 | 19.08                  | 3   |
|         |            | 75         | 0            | 18.92                   | 18.79                 | 19.10                  | 3   |

| Band/BW | Modulation | RB<br>Size | RB<br>Offset | Low CH 37850          | Mid CH 38000          | High CH 38150         | MPR |
|---------|------------|------------|--------------|-----------------------|-----------------------|-----------------------|-----|
|         |            |            |              | Frequency<br>2580 MHz | Frequency<br>2595 MHz | Frequency<br>2610 MHz |     |
| 38/ 20  | QPSK       | 1          | 0            | 21.98                 | 21.94                 | 22.07                 | 0   |
|         |            | 1          | 50           | 21.68                 | 21.68                 | 21.82                 | 0   |
|         |            | 1          | 99           | 21.98                 | 21.98                 | 22.12                 | 0   |
|         |            | 50         | 0            | 20.82                 | 20.82                 | 21.03                 | 1   |
|         |            | 50         | 25           | 20.84                 | 20.82                 | 20.96                 | 1   |
|         |            | 50         | 50           | 20.91                 | 20.91                 | 21.13                 | 1   |
|         |            | 100        | 0            | 20.97                 | 20.93                 | 21.11                 | 1   |
|         | 16QAM      | 1          | 0            | 20.99                 | 21.00                 | 21.12                 | 1   |
|         |            | 1          | 50           | 20.81                 | 20.79                 | 20.99                 | 1   |
|         |            | 1          | 99           | 21.10                 | 21.13                 | 21.29                 | 1   |
|         |            | 50         | 0            | 19.99                 | 19.92                 | 20.16                 | 2   |
|         |            | 50         | 25           | 19.88                 | 19.91                 | 20.07                 | 2   |
|         |            | 50         | 50           | 20.01                 | 19.97                 | 20.18                 | 2   |
|         |            | 100        | 0            | 19.94                 | 19.89                 | 20.03                 | 2   |
|         | 64QAM      | 1          | 0            | 19.61                 | 19.63                 | 19.79                 | 2   |
|         |            | 1          | 50           | 19.56                 | 19.50                 | 19.69                 | 2   |
|         |            | 1          | 99           | 19.82                 | 19.79                 | 20.02                 | 2   |
|         |            | 50         | 0            | 18.99                 | 18.97                 | 19.08                 | 3   |
|         |            | 50         | 25           | 18.83                 | 18.81                 | 19.00                 | 3   |
|         |            | 50         | 50           | 18.98                 | 18.98                 | 19.12                 | 3   |
|         |            | 100        | 0            | 18.94                 | 18.87                 | 19.11                 | 3   |



**BUREAU  
VERITAS**

**Test Report No.: W7L-P21080009RF17**

**LTE Band 41**

| Band/BW | Modulation | RB<br>Size | RB<br>Offset | Low CH<br>(39675)        | Mid CH<br>(40620)      | High CH<br>(41565)       | MPR |
|---------|------------|------------|--------------|--------------------------|------------------------|--------------------------|-----|
|         |            |            |              | Frequency<br>(2498.5)MHz | Frequency<br>(2593)MHz | Frequency<br>(2687.5)MHz |     |
| 41/ 5   | QPSK       | 1          | 0            | 22.13                    | 22.30                  | 22.13                    | 0   |
|         |            | 1          | 12           | 22.07                    | 22.29                  | 22.10                    | 0   |
|         |            | 1          | 24           | 21.40                    | 21.66                  | 21.41                    | 0   |
|         |            | 12         | 0            | 21.07                    | 21.35                  | 21.15                    | 1   |
|         |            | 12         | 6            | 21.08                    | 21.31                  | 21.08                    | 1   |
|         |            | 12         | 13           | 20.91                    | 21.24                  | 21.01                    | 1   |
|         |            | 25         | 0            | 21.02                    | 21.25                  | 21.08                    | 1   |
|         | 16QAM      | 1          | 0            | 21.18                    | 21.44                  | 21.27                    | 1   |
|         |            | 1          | 12           | 21.34                    | 21.63                  | 21.44                    | 1   |
|         |            | 1          | 24           | 20.86                    | 21.13                  | 20.91                    | 1   |
|         |            | 12         | 0            | 20.13                    | 20.38                  | 20.26                    | 2   |
|         |            | 12         | 6            | 20.04                    | 20.31                  | 20.14                    | 2   |
|         |            | 12         | 13           | 19.97                    | 20.27                  | 20.09                    | 2   |
|         |            | 25         | 0            | 20.11                    | 20.29                  | 20.17                    | 2   |
|         | 64QAM      | 1          | 0            | 19.86                    | 20.17                  | 19.99                    | 2   |
|         |            | 1          | 12           | 19.72                    | 19.95                  | 19.75                    | 2   |
|         |            | 1          | 24           | 19.33                    | 19.67                  | 19.51                    | 2   |
|         |            | 12         | 0            | 19.15                    | 19.28                  | 19.21                    | 3   |
|         |            | 12         | 6            | 19.06                    | 19.37                  | 19.18                    | 3   |
|         |            | 12         | 13           | 19.00                    | 19.18                  | 19.06                    | 3   |
|         |            | 25         | 0            | 19.07                    | 19.35                  | 19.10                    | 3   |

| Band/BW | Modulation | RB<br>Size | RB<br>Offset | Low CH<br>(39700)      | Mid CH<br>(40620)      | High CH<br>(41540)     | MPR |
|---------|------------|------------|--------------|------------------------|------------------------|------------------------|-----|
|         |            |            |              | Frequency<br>(2501)MHz | Frequency<br>(2593)MHz | Frequency<br>(2685)MHz |     |
| 41/ 10  | QPSK       | 1          | 0            | 22.10                  | 22.30                  | 22.11                  | 0   |
|         |            | 1          | 24           | 22.07                  | 22.30                  | 22.15                  | 0   |
|         |            | 1          | 49           | 21.37                  | 21.62                  | 21.39                  | 0   |
|         |            | 25         | 0            | 21.08                  | 21.38                  | 21.19                  | 1   |
|         |            | 25         | 12           | 21.14                  | 21.31                  | 21.14                  | 1   |
|         |            | 25         | 25           | 20.89                  | 21.23                  | 21.02                  | 1   |
|         |            | 50         | 0            | 21.07                  | 21.22                  | 21.08                  | 1   |
|         | 16QAM      | 1          | 0            | 21.18                  | 21.40                  | 21.27                  | 1   |
|         |            | 1          | 24           | 21.39                  | 21.66                  | 21.43                  | 1   |
|         |            | 1          | 49           | 20.86                  | 21.10                  | 20.88                  | 1   |
|         |            | 25         | 0            | 20.15                  | 20.44                  | 20.22                  | 2   |
|         |            | 25         | 12           | 20.08                  | 20.36                  | 20.13                  | 2   |
|         |            | 25         | 25           | 19.96                  | 20.24                  | 20.04                  | 2   |
|         |            | 50         | 0            | 20.15                  | 20.33                  | 20.10                  | 2   |
|         | 64QAM      | 1          | 0            | 19.85                  | 20.14                  | 20.02                  | 2   |
|         |            | 1          | 24           | 19.77                  | 19.99                  | 19.72                  | 2   |
|         |            | 1          | 49           | 19.39                  | 19.64                  | 19.46                  | 2   |
|         |            | 25         | 0            | 19.13                  | 19.34                  | 19.16                  | 3   |
|         |            | 25         | 12           | 19.13                  | 19.31                  | 19.20                  | 3   |
|         |            | 25         | 25           | 18.99                  | 19.20                  | 19.08                  | 3   |
|         |            | 50         | 0            | 19.12                  | 19.36                  | 19.12                  | 3   |

| Band/BW | Modulation | RB<br>Size | RB<br>Offset | Low CH<br>(39725)        | Mid CH<br>(40620)      | High CH<br>(41515)       | MPR |
|---------|------------|------------|--------------|--------------------------|------------------------|--------------------------|-----|
|         |            |            |              | Frequency<br>(2503.5)MHz | Frequency<br>(2593)MHz | Frequency<br>(2682.5)MHz |     |
| 41/ 15  | QPSK       | 1          | 0            | 22.17                    | 22.27                  | 22.13                    | 0   |
|         |            | 1          | 37           | 22.05                    | 22.25                  | 22.15                    | 0   |
|         |            | 1          | 74           | 21.43                    | 21.63                  | 21.41                    | 0   |
|         |            | 36         | 0            | 21.05                    | 21.39                  | 21.21                    | 1   |
|         |            | 36         | 19           | 21.15                    | 21.31                  | 21.09                    | 1   |
|         |            | 36         | 39           | 20.87                    | 21.23                  | 21.05                    | 1   |
|         |            | 75         | 0            | 21.07                    | 21.27                  | 21.05                    | 1   |
|         | 16QAM      | 1          | 0            | 21.22                    | 21.40                  | 21.30                    | 1   |
|         |            | 1          | 37           | 21.38                    | 21.66                  | 21.38                    | 1   |
|         |            | 1          | 74           | 20.82                    | 21.12                  | 20.92                    | 1   |
|         |            | 36         | 0            | 20.19                    | 20.45                  | 20.27                    | 2   |
|         |            | 36         | 19           | 20.02                    | 20.32                  | 20.14                    | 2   |
|         |            | 36         | 39           | 20.01                    | 20.27                  | 20.09                    | 2   |
|         |            | 75         | 0            | 20.16                    | 20.26                  | 20.12                    | 2   |
|         | 64QAM      | 1          | 0            | 19.87                    | 20.15                  | 20.03                    | 2   |
|         |            | 1          | 37           | 19.78                    | 19.96                  | 19.72                    | 2   |
|         |            | 1          | 74           | 19.35                    | 19.67                  | 19.51                    | 2   |
|         |            | 36         | 0            | 19.18                    | 19.28                  | 19.20                    | 3   |
|         |            | 36         | 19           | 19.07                    | 19.33                  | 19.19                    | 3   |
|         |            | 36         | 39           | 19.02                    | 19.22                  | 19.08                    | 3   |
|         |            | 75         | 0            | 19.11                    | 19.37                  | 19.15                    | 3   |

| Band/BW | Modulation | RB Size | RB Offset | Low CH (39750)      | Mid CH (40620)      | High CH (41490)     | MPR |
|---------|------------|---------|-----------|---------------------|---------------------|---------------------|-----|
|         |            |         |           | Frequency (2506)MHz | Frequency (2593)MHz | Frequency (2680)MHz |     |
| 41/ 20  | QPSK       | 1       | 0         | 22.18               | 22.35               | 22.19               | 0   |
|         |            | 1       | 50        | 22.09               | 22.31               | 22.17               | 0   |
|         |            | 1       | 99        | 21.45               | 21.67               | 21.47               | 0   |
|         |            | 50      | 0         | 21.11               | 21.40               | 21.22               | 1   |
|         |            | 50      | 25        | 21.16               | 21.36               | 21.16               | 1   |
|         |            | 50      | 50        | 20.95               | 21.25               | 21.07               | 1   |
|         |            | 100     | 0         | 21.08               | 21.30               | 21.10               | 1   |
|         | 16QAM      | 1       | 0         | 21.25               | 21.46               | 21.32               | 1   |
|         |            | 1       | 50        | 21.42               | 21.68               | 21.45               | 1   |
|         |            | 1       | 99        | 20.88               | 21.15               | 20.96               | 1   |
|         |            | 50      | 0         | 20.21               | 20.46               | 20.28               | 2   |
|         |            | 50      | 25        | 20.10               | 20.37               | 20.19               | 2   |
|         |            | 50      | 50        | 20.04               | 20.29               | 20.11               | 2   |
|         |            | 100     | 0         | 20.17               | 20.34               | 20.18               | 2   |
|         | 64QAM      | 1       | 0         | 19.93               | 20.19               | 20.04               | 2   |
|         |            | 1       | 50        | 19.80               | 20.01               | 19.80               | 2   |
|         |            | 1       | 99        | 19.41               | 19.69               | 19.52               | 2   |
|         |            | 50      | 0         | 19.19               | 19.36               | 19.23               | 3   |
|         |            | 50      | 25        | 19.14               | 19.39               | 19.23               | 3   |
|         |            | 50      | 50        | 19.04               | 19.26               | 19.10               | 3   |
|         |            | 100     | 0         | 19.13               | 19.38               | 19.18               | 3   |

**EIRP**

**WCDMA IV**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>c</sub> (dB) | EIRP (dBm) | EIRP (mW)     | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|---------------|-----------|
| 1312    | 1712.4          | 21.41                 | 2.55                                | 21.81      | 151.71        | 1         |
| 1413    | 1732.6          | 21.45                 | 2.55                                | 21.85      | <b>153.11</b> | 1         |
| 1513    | 1752.6          | 21.38                 | 2.55                                | 21.78      | 150.66        | 1         |

**LTE BAND 7**

**CHANNEL BANDWIDTH: 5MHz QPSK**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>c</sub> (dB) | EIRP (dBm) | EIRP (mW)     | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|---------------|-----------|
| 20775   | 2502.5          | 21.45                 | 2.02                                | 23.47      | 222.33        | 2         |
| 21100   | 2535.0          | 21.73                 | 2.02                                | 23.75      | <b>237.14</b> | 2         |
| 21425   | 2567.5          | 21.52                 | 2.02                                | 23.54      | 225.94        | 2         |

**CHANNEL BANDWIDTH: 5MHz 16QAM**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>c</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 20775   | 2502.5          | 20.71                 | 2.02                                | 22.73      | 187.5     | 2         |
| 21100   | 2535.0          | 21.08                 | 2.02                                | 23.1       | 204.17    | 2         |
| 21425   | 2567.5          | 20.85                 | 2.02                                | 22.87      | 193.64    | 2         |

**CHANNEL BANDWIDTH: 5MHz 64QAM**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>c</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 20775   | 2502.5          | 19.56                 | 2.02                                | 21.58      | 143.88    | 2         |
| 21100   | 2535            | 19.94                 | 2.02                                | 21.96      | 157.04    | 2         |
| 21425   | 2567.5          | 19.75                 | 2.02                                | 21.77      | 150.31    | 2         |

**CHANNEL BANDWIDTH: 10MHz QPSK**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW)     | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|---------------|-----------|
| 20800   | 2505.0          | 21.42                 | 2.02                                | 23.44      | 220.8         | 2         |
| 21100   | 2535.0          | 21.76                 | 2.02                                | 23.78      | <b>238.78</b> | 2         |
| 21400   | 2565.0          | 21.5                  | 2.02                                | 23.52      | 224.91        | 2         |

**CHANNEL BANDWIDTH: 10MHz 16QAM**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 20800   | 2505.0          | 20.71                 | 2.02                                | 22.73      | 187.5     | 2         |
| 21100   | 2535.0          | 21.05                 | 2.02                                | 23.07      | 202.77    | 2         |
| 21400   | 2565.0          | 20.81                 | 2.02                                | 22.83      | 191.87    | 2         |

**CHANNEL BANDWIDTH: 10MHz 64QAM**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 20800   | 2505            | 19.57                 | 2.02                                | 21.59      | 144.21    | 2         |
| 21100   | 2535            | 19.95                 | 2.02                                | 21.97      | 157.4     | 2         |
| 21400   | 2565            | 19.72                 | 2.02                                | 21.74      | 149.28    | 2         |

**CHANNEL BANDWIDTH: 15MHz QPSK**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW)     | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|---------------|-----------|
| 20825   | 2507.5          | 21.49                 | 2.02                                | 23.51      | 224.39        | 2         |
| 21100   | 2535.0          | 21.76                 | 2.02                                | 23.78      | <b>238.78</b> | 2         |
| 21375   | 2562.5          | 21.49                 | 2.02                                | 23.51      | 224.39        | 2         |

**CHANNEL BANDWIDTH: 15MHz 16QAM**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 20825   | 2507.5          | 20.75                 | 2.02                                | 22.77      | 189.23    | 2         |
| 21100   | 2535.0          | 21.12                 | 2.02                                | 23.14      | 206.06    | 2         |
| 21375   | 2562.5          | 20.82                 | 2.02                                | 22.84      | 192.31    | 2         |

**CHANNEL BANDWIDTH: 15MHz 64QAM**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 20825   | 2507.5          | 19.57                 | 2.02                                | 21.59      | 144.21    | 2         |
| 21100   | 2535            | 19.96                 | 2.02                                | 21.98      | 157.76    | 2         |
| 21375   | 2562.5          | 19.73                 | 2.02                                | 21.75      | 149.62    | 2         |

**CHANNEL BANDWIDTH: 20MHz QPSK**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW)     | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|---------------|-----------|
| 20850   | 2510.0          | 21.5                  | 2.02                                | 23.52      | 224.91        | 2         |
| 21100   | 2535.0          | 21.8                  | 2.02                                | 23.82      | <b>240.99</b> | 2         |
| 21350   | 2560.0          | 21.55                 | 2.02                                | 23.57      | 227.51        | 2         |

**CHANNEL BANDWIDTH: 20MHz 16QAM**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 20850   | 2510.0          | 20.78                 | 2.02                                | 22.8       | 190.55    | 2         |
| 21100   | 2535.0          | 21.13                 | 2.02                                | 23.15      | 206.54    | 2         |
| 21350   | 2560.0          | 20.87                 | 2.02                                | 22.89      | 194.54    | 2         |

**CHANNEL BANDWIDTH: 20MHz 64QAM**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 20850   | 2510            | 19.63                 | 2.02                                | 21.65      | 146.22    | 2         |
| 21100   | 2535            | 19.99                 | 2.02                                | 22.01      | 158.85    | 2         |
| 21350   | 2560            | 19.77                 | 2.02                                | 21.79      | 151.01    | 2         |

**REMARKS:** ERP Output Power (dBm) = EIRP (dBm) -2.15(dB).

**LTE BAND CA\_7C**

**CHANNEL BANDWIDTH: 10MHz+20MHz QPSK**

| Channel | Frequency<br>(MHz) | Channel | Frequency<br>(MHz) | Conducted<br>Power<br>(dBm) | G <sub>T-LC</sub><br>(dB) | EIRP<br>(dBm) | EIRP<br>(mW)  | Limit<br>(W) |
|---------|--------------------|---------|--------------------|-----------------------------|---------------------------|---------------|---------------|--------------|
| 20805   | 2505.5             | 20949   | 2519.9             | 21.15                       | 2.02                      | 23.17         | 207.49        | 2            |
| 21006   | 2525.6             | 21150   | 2540.0             | 21.04                       | 2.02                      | 23.06         | 202.3         | 2            |
| 21206   | 2545.6             | 21350   | 2560.0             | 21.6                        | 2.02                      | 23.62         | <b>230.14</b> | 2            |

**CHANNEL BANDWIDTH: 10MHz+20MHz 16QAM**

| Channel | Frequency<br>(MHz) | Channel | Frequency<br>(MHz) | Conducted<br>Power<br>(dBm) | G <sub>T-LC</sub><br>(dB) | EIRP<br>(dBm) | EIRP<br>(mW) | Limit<br>(W) |
|---------|--------------------|---------|--------------------|-----------------------------|---------------------------|---------------|--------------|--------------|
| 20805   | 2505.5             | 20949   | 2519.9             | 20.97                       | 2.02                      | 22.99         | 199.07       | 2            |
| 21006   | 2525.6             | 21150   | 2540.0             | 20.65                       | 2.02                      | 22.67         | 184.93       | 2            |
| 21206   | 2545.6             | 21350   | 2560.0             | 20.93                       | 2.02                      | 22.95         | 197.24       | 2            |

**CHANNEL BANDWIDTH: 10MHz+20MHz 64QAM**

| Channel | Frequency<br>(MHz) | Channel | Frequency<br>(MHz) | Conducted<br>Power<br>(dBm) | G <sub>T-LC</sub><br>(dB) | EIRP<br>(dBm) | EIRP<br>(mW) | Limit<br>(W) |
|---------|--------------------|---------|--------------------|-----------------------------|---------------------------|---------------|--------------|--------------|
| 20805   | 2505.5             | 20949   | 2519.9             | 19.59                       | 2.02                      | 21.61         | 144.88       | 2            |
| 21006   | 2525.6             | 21150   | 2540.0             | 19.68                       | 2.02                      | 21.7          | 147.91       | 2            |
| 21206   | 2545.6             | 21350   | 2560.0             | 19.73                       | 2.02                      | 21.75         | 149.62       | 2            |

**CHANNEL BANDWIDTH: 15MHz+10MHz QPSK**

| Channel | Frequency<br>(MHz) | Channel | Frequency<br>(MHz) | Conducted<br>Power<br>(dBm) | G <sub>T-LC</sub><br>(dB) | EIRP<br>(dBm) | EIRP<br>(mW)  | Limit<br>(W) |
|---------|--------------------|---------|--------------------|-----------------------------|---------------------------|---------------|---------------|--------------|
| 20825   | 2507.5             | 20945   | 2519.5             | 21.41                       | 2.02                      | 23.43         | 220.29        | 2            |
| 21051   | 2530.1             | 21171   | 2542.1             | 21.23                       | 2.02                      | 23.25         | 211.35        | 2            |
| 21227   | 2552.7             | 21397   | 2564.7             | 21.51                       | 2.02                      | 23.53         | <b>225.42</b> | 2            |

**CHANNEL BANDWIDTH: 15MHz+10MHz 16QAM**

| Channel | Frequency<br>(MHz) | Channel | Frequency<br>(MHz) | Conducted<br>Power<br>(dBm) | G <sub>T-LC</sub><br>(dB) | EIRP<br>(dBm) | EIRP<br>(mW) | Limit<br>(W) |
|---------|--------------------|---------|--------------------|-----------------------------|---------------------------|---------------|--------------|--------------|
| 20825   | 2507.5             | 20945   | 2519.5             | 20.57                       | 2.02                      | 22.59         | 181.55       | 2            |
| 21051   | 2530.1             | 21171   | 2542.1             | 20.34                       | 2.02                      | 22.36         | 172.19       | 2            |
| 21227   | 2552.7             | 21397   | 2564.7             | 20.87                       | 2.02                      | 22.89         | 194.54       | 2            |

**CHANNEL BANDWIDTH: 15MHz+10MHz 64QAM**

| Channel | Frequency<br>(MHz) | Channel | Frequency<br>(MHz) | Conducted<br>Power<br>(dBm) | G <sub>T-LC</sub><br>(dB) | EIRP<br>(dBm) | EIRP<br>(mW) | Limit<br>(W) |
|---------|--------------------|---------|--------------------|-----------------------------|---------------------------|---------------|--------------|--------------|
| 20825   | 2507.5             | 20945   | 2519.5             | 19.69                       | 2.02                      | 21.71         | 148.25       | 2            |
| 21051   | 2530.1             | 21171   | 2542.1             | 19.42                       | 2.02                      | 21.44         | 139.32       | 2            |
| 21227   | 2552.7             | 21397   | 2564.7             | 19.84                       | 2.02                      | 21.86         | 153.46       | 2            |

**CHANNEL BANDWIDTH: 15MHz+15MHz QPSK**

| Channel | Frequency<br>(MHz) | Channel | Frequency<br>(MHz) | Conducted<br>Power<br>(dBm) | G <sub>T-Lc</sub><br>(dB) | EIRP<br>(dBm) | EIRP<br>(mW)  | Limit<br>(W) |
|---------|--------------------|---------|--------------------|-----------------------------|---------------------------|---------------|---------------|--------------|
| 20825   | 2507.5             | 2522.5  | 2502.5             | 20.97                       | 2.02                      | 22.99         | 199.07        | 2            |
| 21025   | 2527.5             | 2542.5  | 2535.0             | 20.7                        | 2.02                      | 22.72         | 187.07        | 2            |
| 21225   | 2547.5             | 2562.5  | 2567.5             | 21.44                       | 2.02                      | 23.46         | <b>221.82</b> | 2            |

**CHANNEL BANDWIDTH: 15MHz+15MHz 16QAM**

| Channel | Frequency<br>(MHz) | Channel | Frequency<br>(MHz) | Conducted<br>Power<br>(dBm) | G <sub>T-Lc</sub><br>(dB) | EIRP<br>(dBm) | EIRP<br>(mW) | Limit<br>(W) |
|---------|--------------------|---------|--------------------|-----------------------------|---------------------------|---------------|--------------|--------------|
| 20825   | 2507.5             | 2522.5  | 2502.5             | 20.85                       | 2.02                      | 22.87         | 193.64       | 2            |
| 21025   | 2527.5             | 2542.5  | 2535.0             | 20.55                       | 2.02                      | 22.57         | 180.72       | 2            |
| 21225   | 2547.5             | 2562.5  | 2567.5             | 20.62                       | 2.02                      | 22.64         | 183.65       | 2            |

**CHANNEL BANDWIDTH: 15MHz+15MHz 64QAM**

| Channel | Frequency<br>(MHz) | Channel | Frequency<br>(MHz) | Conducted<br>Power<br>(dBm) | G <sub>T-Lc</sub><br>(dB) | EIRP<br>(dBm) | EIRP<br>(mW) | Limit<br>(W) |
|---------|--------------------|---------|--------------------|-----------------------------|---------------------------|---------------|--------------|--------------|
| 20825   | 2507.5             | 2522.5  | 2502.5             | 19.62                       | 2.02                      | 21.64         | 145.88       | 2            |
| 21025   | 2527.5             | 2542.5  | 2535.0             | 19.23                       | 2.02                      | 21.25         | 133.35       | 2            |
| 21225   | 2547.5             | 2562.5  | 2567.5             | 19.95                       | 2.02                      | 21.97         | 157.4        | 2            |

**CHANNEL BANDWIDTH: 15MHz+20MHz QPSK**

| Channel | Frequency<br>(MHz) | Channel | Frequency<br>(MHz) | Conducted<br>Power<br>(dBm) | G <sub>T-Lc</sub><br>(dB) | EIRP<br>(dBm) | EIRP<br>(mW)  | Limit<br>(W) |
|---------|--------------------|---------|--------------------|-----------------------------|---------------------------|---------------|---------------|--------------|
| 20828   | 2507.8             | 20975   | 2522.5             | 21.43                       | 2.02                      | 23.45         | <b>221.31</b> | 2            |
| 21003   | 2525.3             | 21175   | 2542.5             | 21.2                        | 2.02                      | 23.22         | 209.89        | 2            |
| 21179   | 2542.9             | 21375   | 2562.5             | 21.11                       | 2.02                      | 23.13         | 205.59        | 2            |

**CHANNEL BANDWIDTH: 15MHz+20MHz 16QAM**

| Channel | Frequency<br>(MHz) | Channel | Frequency<br>(MHz) | Conducted<br>Power<br>(dBm) | G <sub>T-Lc</sub><br>(dB) | EIRP<br>(dBm) | EIRP<br>(mW) | Limit<br>(W) |
|---------|--------------------|---------|--------------------|-----------------------------|---------------------------|---------------|--------------|--------------|
| 20828   | 2507.8             | 20975   | 2522.5             | 20.86                       | 2.02                      | 22.88         | 194.09       | 2            |
| 21003   | 2525.3             | 21175   | 2542.5             | 20.82                       | 2.02                      | 22.84         | 192.31       | 2            |
| 21179   | 2542.9             | 21375   | 2562.5             | 20.93                       | 2.02                      | 22.95         | 197.24       | 2            |

**CHANNEL BANDWIDTH: 15MHz+20MHz 64QAM**

| Channel | Frequency<br>(MHz) | Channel | Frequency<br>(MHz) | Conducted<br>Power<br>(dBm) | G <sub>T-Lc</sub><br>(dB) | EIRP<br>(dBm) | EIRP<br>(mW) | Limit<br>(W) |
|---------|--------------------|---------|--------------------|-----------------------------|---------------------------|---------------|--------------|--------------|
| 20828   | 2507.8             | 20975   | 2522.5             | 19.74                       | 2.02                      | 21.76         | 149.97       | 2            |
| 21003   | 2525.3             | 21175   | 2542.5             | 19.48                       | 2.02                      | 21.5          | 141.25       | 2            |
| 21179   | 2542.9             | 21375   | 2562.5             | 19.55                       | 2.02                      | 21.57         | 143.55       | 2            |

**CHANNEL BANDWIDTH: 20MHz+10MHz QPSK**

| Channel | Frequency<br>(MHz) | Channel | Frequency<br>(MHz) | Conducted<br>Power<br>(dBm) | G <sub>T-Lc</sub><br>(dB) | EIRP<br>(dBm) | EIRP<br>(mW)  | Limit<br>(W) |
|---------|--------------------|---------|--------------------|-----------------------------|---------------------------|---------------|---------------|--------------|
| 20850   | 2510.0             | 20994   | 2524.4             | 20.91                       | 2.02                      | 22.93         | 196.34        | 2            |
| 21051   | 2530.1             | 21195   | 2544.5             | 21.18                       | 2.02                      | 23.2          | 208.93        | 2            |
| 21251   | 2550.1             | 21395   | 2564.5             | 21.44                       | 2.02                      | 23.46         | <b>221.82</b> | 2            |

**CHANNEL BANDWIDTH: 20MHz+10MHz 16QAM**

| Channel | Frequency<br>(MHz) | Channel | Frequency<br>(MHz) | Conducted<br>Power<br>(dBm) | G <sub>T-Lc</sub><br>(dB) | EIRP<br>(dBm) | EIRP<br>(mW) | Limit<br>(W) |
|---------|--------------------|---------|--------------------|-----------------------------|---------------------------|---------------|--------------|--------------|
| 20850   | 2510.0             | 20994   | 2524.4             | 20.7                        | 2.02                      | 22.72         | 187.07       | 2            |
| 21051   | 2530.1             | 21195   | 2544.5             | 20.81                       | 2.02                      | 22.83         | 191.87       | 2            |
| 21251   | 2550.1             | 21395   | 2564.5             | 20.98                       | 2.02                      | 23            | 199.53       | 2            |

**CHANNEL BANDWIDTH: 20MHz+10MHz 64QAM**

| Channel | Frequency<br>(MHz) | Channel | Frequency<br>(MHz) | Conducted<br>Power<br>(dBm) | G <sub>T-Lc</sub><br>(dB) | EIRP<br>(dBm) | EIRP<br>(mW) | Limit<br>(W) |
|---------|--------------------|---------|--------------------|-----------------------------|---------------------------|---------------|--------------|--------------|
| 20850   | 2510.0             | 20994   | 2524.4             | 19.74                       | 2.02                      | 21.76         | 149.97       | 2            |
| 21051   | 2530.1             | 21195   | 2544.5             | 19.84                       | 2.02                      | 21.86         | 153.46       | 2            |
| 21251   | 2550.1             | 21395   | 2564.5             | 19.72                       | 2.02                      | 21.74         | 149.28       | 2            |

**CHANNEL BANDWIDTH: 20MHz+15MHz QPSK**

| Channel | Frequency<br>(MHz) | Channel | Frequency<br>(MHz) | Conducted<br>Power<br>(dBm) | G <sub>T-Lc</sub><br>(dB) | EIRP<br>(dBm) | EIRP<br>(mW)  | Limit<br>(W) |
|---------|--------------------|---------|--------------------|-----------------------------|---------------------------|---------------|---------------|--------------|
| 20850   | 2510.0             | 21021   | 2527.1             | 20.79                       | 2.02                      | 22.81         | 190.99        | 2            |
| 21026   | 2527.6             | 21197   | 2544.7             | 21.12                       | 2.02                      | 23.14         | 206.06        | 2            |
| 21201   | 2545.1             | 21372   | 2562.2             | 21.5                        | 2.02                      | 23.52         | <b>224.91</b> | 2            |

**CHANNEL BANDWIDTH: 20MHz+15MHz 16QAM**

| Channel | Frequency<br>(MHz) | Channel | Frequency<br>(MHz) | Conducted<br>Power<br>(dBm) | G <sub>T-Lc</sub><br>(dB) | EIRP<br>(dBm) | EIRP<br>(mW) | Limit<br>(W) |
|---------|--------------------|---------|--------------------|-----------------------------|---------------------------|---------------|--------------|--------------|
| 20850   | 2510.0             | 21021   | 2527.1             | 20.42                       | 2.02                      | 22.44         | 175.39       | 2            |
| 21026   | 2527.6             | 21197   | 2544.7             | 20.86                       | 2.02                      | 22.88         | 194.09       | 2            |
| 21201   | 2545.1             | 21372   | 2562.2             | 20.91                       | 2.02                      | 22.93         | 196.34       | 2            |

**CHANNEL BANDWIDTH: 20MHz+15MHz 64QAM**

| Channel | Frequency<br>(MHz) | Channel | Frequency<br>(MHz) | Conducted<br>Power<br>(dBm) | G <sub>T-Lc</sub><br>(dB) | EIRP<br>(dBm) | EIRP<br>(mW) | Limit<br>(W) |
|---------|--------------------|---------|--------------------|-----------------------------|---------------------------|---------------|--------------|--------------|
| 20850   | 2510.0             | 21021   | 2527.1             | 19.74                       | 2.02                      | 21.76         | 149.97       | 2            |
| 21026   | 2527.6             | 21197   | 2544.7             | 19.63                       | 2.02                      | 21.65         | 146.22       | 2            |
| 21201   | 2545.1             | 21372   | 2562.2             | 19.77                       | 2.02                      | 21.79         | 151.01       | 2            |

**CHANNEL BANDWIDTH: 20MHz+20MHz QPSK**

| Channel | Frequency<br>(MHz) | Channel | Frequency<br>(MHz) | Conducted<br>Power<br>(dBm) | G <sub>T-Lc</sub><br>(dB) | EIRP<br>(dBm) | EIRP<br>(mW)  | Limit<br>(W) |
|---------|--------------------|---------|--------------------|-----------------------------|---------------------------|---------------|---------------|--------------|
| 20850   | 2510.0             | 21048   | 2529.8             | 21.45                       | 2.02                      | 23.47         | 222.33        | 2            |
| 21001   | 2525.1             | 21199   | 2544.9             | 21.07                       | 2.02                      | 23.09         | 203.7         | 2            |
| 21206   | 2540.2             | 21350   | 2560.0             | 21.64                       | 2.02                      | 23.66         | <b>232.27</b> | 2            |

**CHANNEL BANDWIDTH: 20MHz+20MHz 16QAM**

| Channel | Frequency<br>(MHz) | Channel | Frequency<br>(MHz) | Conducted<br>Power<br>(dBm) | G <sub>T-Lc</sub><br>(dB) | EIRP<br>(dBm) | EIRP<br>(mW) | Limit<br>(W) |
|---------|--------------------|---------|--------------------|-----------------------------|---------------------------|---------------|--------------|--------------|
| 20850   | 2510.0             | 21048   | 2529.8             | 20.76                       | 2.02                      | 22.78         | 189.67       | 2            |
| 21001   | 2525.1             | 21199   | 2544.9             | 20.6                        | 2.02                      | 22.62         | 182.81       | 2            |
| 21206   | 2540.2             | 21350   | 2560.0             | 20.92                       | 2.02                      | 22.94         | 196.79       | 2            |

**CHANNEL BANDWIDTH: 20MHz+20MHz 64QAM**

| Channel | Frequency<br>(MHz) | Channel | Frequency<br>(MHz) | Conducted<br>Power<br>(dBm) | G <sub>T-Lc</sub><br>(dB) | EIRP<br>(dBm) | EIRP<br>(mW) | Limit<br>(W) |
|---------|--------------------|---------|--------------------|-----------------------------|---------------------------|---------------|--------------|--------------|
| 20850   | 2510.0             | 21048   | 2529.8             | 19.79                       | 2.02                      | 21.81         | 151.71       | 2            |
| 21001   | 2525.1             | 21199   | 2544.9             | 19.51                       | 2.02                      | 21.53         | 142.23       | 2            |
| 21206   | 2540.2             | 21350   | 2560.0             | 19.87                       | 2.02                      | 21.89         | 154.53       | 2            |



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Test Report No.: W7L-P21080009RF17

#### LTE BAND 38

##### CHANNEL BANDWIDTH: 5MHz QPSK

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW)     | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|---------------|-----------|
| 37775   | 2572.5          | 21.93                 | 1.73                                | 23.66      | 232.27        | 2         |
| 38000   | 2595.0          | 21.9                  | 1.73                                | 23.63      | 230.67        | 2         |
| 38225   | 2617.5          | 22.11                 | 1.73                                | 23.84      | <b>242.10</b> | 2         |

##### CHANNEL BANDWIDTH: 5MHz 16QAM

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 37775   | 2572.5          | 21.08                 | 1.73                                | 22.81      | 190.99    | 2         |
| 38000   | 2595.0          | 21.05                 | 1.73                                | 22.78      | 189.67    | 2         |
| 38225   | 2617.5          | 21.27                 | 1.73                                | 23         | 199.53    | 2         |

##### CHANNEL BANDWIDTH: 5MHz 64QAM

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 37775   | 2572.5          | 19.74                 | 1.73                                | 21.47      | 140.28    | 2         |
| 38000   | 2595            | 19.78                 | 1.73                                | 21.51      | 141.58    | 2         |
| 38225   | 2617.5          | 20                    | 1.73                                | 21.73      | 148.94    | 2         |

**CHANNEL BANDWIDTH: 10MHz QPSK**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW)     | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|---------------|-----------|
| 37800   | 2575.0          | 21.50                 | 1.73                                | 23.23      | 210.38        | 2         |
| 38000   | 2595.0          | 21.70                 | 1.73                                | 23.43      | <b>220.29</b> | 2         |
| 38200   | 2615.0          | 21.65                 | 1.73                                | 23.38      | 217.77        | 2         |

**CHANNEL BANDWIDTH: 10MHz 16QAM**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 37800   | 2575.0          | 20.87                 | 1.73                                | 22.60      | 181.97    | 2         |
| 38000   | 2595.0          | 20.98                 | 1.73                                | 22.71      | 186.64    | 2         |
| 38200   | 2615.0          | 21.04                 | 1.73                                | 22.77      | 189.23    | 2         |

**CHANNEL BANDWIDTH: 10MHz 64QAM**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 37800   | 2575            | 19.66                 | 1.73                                | 21.39      | 137.72    | 2         |
| 38000   | 2595            | 19.81                 | 1.73                                | 21.54      | 142.56    | 2         |
| 38200   | 2615            | 19.81                 | 1.73                                | 21.54      | 142.56    | 2         |

**CHANNEL BANDWIDTH: 15MHz QPSK**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW)     | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|---------------|-----------|
| 37825   | 2577.5          | 21.56                 | 1.73                                | 23.29      | 213.30        | 2         |
| 38000   | 2595.0          | 21.73                 | 1.73                                | 23.46      | <b>221.82</b> | 2         |
| 38175   | 2612.5          | 21.66                 | 1.73                                | 23.39      | 218.27        | 2         |

**CHANNEL BANDWIDTH: 15MHz 16QAM**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 37825   | 2577.5          | 20.86                 | 1.73                                | 22.59      | 181.55    | 2         |
| 38000   | 2595.0          | 21.02                 | 1.73                                | 22.75      | 188.36    | 2         |
| 38175   | 2612.5          | 21.04                 | 1.73                                | 22.77      | 189.23    | 2         |

**CHANNEL BANDWIDTH: 15MHz 64QAM**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 37825   | 2577.5          | 19.66                 | 1.73                                | 21.39      | 137.72    | 2         |
| 38000   | 2595            | 19.82                 | 1.73                                | 21.55      | 142.89    | 2         |
| 38175   | 2612.5          | 19.84                 | 1.73                                | 21.57      | 143.55    | 2         |

**CHANNEL BANDWIDTH: 20MHz QPSK**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW)     | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|---------------|-----------|
| 37850   | 2580.0          | 21.58                 | 1.73                                | 23.31      | 214.29        | 2         |
| 38000   | 2595.0          | 21.74                 | 1.73                                | 23.47      | <b>222.33</b> | 2         |
| 38150   | 2610.0          | 21.70                 | 1.73                                | 23.43      | 220.29        | 2         |

**CHANNEL BANDWIDTH: 20MHz 16QAM**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 37850   | 2580.0          | 20.90                 | 1.73                                | 22.63      | 183.23    | 2         |
| 38000   | 2595.0          | 21.04                 | 1.73                                | 22.77      | 189.23    | 2         |
| 38150   | 2610.0          | 21.06                 | 1.73                                | 22.79      | 190.11    | 2         |

**CHANNEL BANDWIDTH: 20MHz 64QAM**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 37850   | 2580            | 19.68                 | 1.73                                | 21.41      | 138.36    | 2         |
| 38000   | 2595            | 19.85                 | 1.73                                | 21.58      | 143.88    | 2         |
| 38150   | 2610            | 19.86                 | 1.73                                | 21.59      | 144.21    | 2         |



**BUREAU  
VERITAS**

Test Report No.: W7L-P21080009RF17

## LTE BAND 41

### CHANNEL BANDWIDTH: 5MHz QPSK

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW)     | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|---------------|-----------|
| 39675   | 2498.5          | 22.14                 | 2.02                                | 24.16      | 260.62        | 2         |
| 40620   | 2593.0          | 22.16                 | 2.02                                | 24.18      | <b>261.82</b> | 2         |
| 41565   | 2687.5          | 21.94                 | 2.02                                | 23.96      | 248.89        | 2         |

### CHANNEL BANDWIDTH: 5MHz 16QAM

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 39675   | 2498.5          | 21.13                 | 2.02                                | 23.15      | 206.54    | 2         |
| 40620   | 2593.0          | 21.26                 | 2.02                                | 23.28      | 212.81    | 2         |
| 41565   | 2687.5          | 21.02                 | 2.02                                | 23.04      | 201.37    | 2         |

### CHANNEL BANDWIDTH: 5MHz 64QAM

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 39715   | 2498.5          | 19.98                 | 2.02                                | 22.00      | 158.49    | 2         |
| 40620   | 2593.0          | 20.13                 | 2.02                                | 22.15      | 164.06    | 2         |
| 41565   | 2687.5          | 19.91                 | 2.02                                | 21.93      | 155.96    | 2         |

**CHANNEL BANDWIDTH: 10MHz QPSK**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW)     | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|---------------|-----------|
| 39700   | 2501.0          | 22.11                 | 2.02                                | 24.13      | 258.82        | 2         |
| 40620   | 2593.0          | 22.16                 | 2.02                                | 24.18      | <b>261.82</b> | 2         |
| 41540   | 2685.0          | 21.92                 | 2.02                                | 23.94      | 247.74        | 2         |

**CHANNEL BANDWIDTH: 10MHz 16QAM**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 39700   | 2501.0          | 21.17                 | 2.02                                | 23.19      | 208.45    | 2         |
| 40620   | 2593.0          | 21.29                 | 2.02                                | 23.31      | 214.29    | 2         |
| 41540   | 2685.0          | 21.01                 | 2.02                                | 23.03      | 200.91    | 2         |

**CHANNEL BANDWIDTH: 10MHz 64QAM**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 39700   | 2501.0          | 20.01                 | 2.02                                | 22.03      | 159.59    | 2         |
| 40620   | 2593.0          | 20.10                 | 2.02                                | 22.12      | 162.93    | 2         |
| 41540   | 2685.0          | 19.93                 | 2.02                                | 21.95      | 156.68    | 2         |

**CHANNEL BANDWIDTH: 15MHz QPSK**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW)     | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|---------------|-----------|
| 39725   | 2503.5          | 22.18                 | 2.02                                | 24.2       | <b>263.03</b> | 2         |
| 40620   | 2593.0          | 22.13                 | 2.02                                | 24.15      | 260.02        | 2         |
| 41515   | 2682.5          | 21.94                 | 2.02                                | 23.96      | 248.89        | 2         |

**CHANNEL BANDWIDTH: 15MHz 16QAM**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 39725   | 2503.5          | 21.16                 | 2.02                                | 23.18      | 207.97    | 2         |
| 40620   | 2593.0          | 21.29                 | 2.02                                | 23.31      | 214.29    | 2         |
| 41515   | 2682.5          | 20.96                 | 2.02                                | 22.98      | 198.61    | 2         |

**CHANNEL BANDWIDTH: 15MHz 64QAM**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 39725   | 2503.5          | 20.02                 | 2.02                                | 22.04      | 159.96    | 2         |
| 40620   | 2593.0          | 20.12                 | 2.02                                | 22.14      | 163.68    | 2         |
| 41515   | 2682.5          | 19.94                 | 2.02                                | 21.96      | 157.04    | 2         |

**CHANNEL BANDWIDTH: 20MHz QPSK**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW)     | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|---------------|-----------|
| 39750   | 2506.0          | 22.19                 | 2.02                                | 24.21      | 263.63        | 2         |
| 40620   | 2593.0          | 22.21                 | 2.02                                | 24.23      | <b>264.85</b> | 2         |
| 41490   | 2680.0          | 22.00                 | 2.02                                | 24.02      | 252.35        | 2         |

**CHANNEL BANDWIDTH: 20MHz 16QAM**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 39750   | 2506.0          | 21.20                 | 2.02                                | 23.22      | 209.89    | 2         |
| 40620   | 2593.0          | 21.31                 | 2.02                                | 23.33      | 215.28    | 2         |
| 41490   | 2680.0          | 21.03                 | 2.02                                | 23.05      | 201.84    | 2         |

**CHANNEL BANDWIDTH: 20 MHz 64QAM**

| Channel | Frequency (MHz) | Conducted Power (dBm) | G <sub>T</sub> -L <sub>C</sub> (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
|---------|-----------------|-----------------------|-------------------------------------|------------|-----------|-----------|
| 39750   | 2506.0          | 20.04                 | 2.02                                | 22.06      | 160.69    | 2         |
| 40620   | 2593.0          | 20.15                 | 2.02                                | 22.17      | 164.82    | 2         |
| 41490   | 2680.0          | 19.95                 | 2.02                                | 21.97      | 157.4     | 2         |



### 3.2.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

### 3.2.2 TEST PROCEDURE

- NOTE:** The frequency error was recorded frequency error from the communication simulator.

The diagram illustrates the experimental setup. On the left, a box labeled 'COMMUNICATION SIMULATOR' is connected to a box labeled 'DC POWER SUPPLY'. A line from the simulator extends to the right, crossing a vertical boundary. On the right side, there is a box labeled 'EUT' (External Under Test) which is highlighted in pink. Above the 'EUT' box is the label 'EXTERNAL POWER SOURCE'. Further up and to the right, within a section labeled 'OVEN ROOM', is an 'ANTENNA' represented by a T-shaped symbol. The 'COMMUNICATION SIMULATOR' is connected to the 'ANTENNA' via a horizontal line that crosses the vertical boundary. The 'DC POWER SUPPLY' is connected to the 'EUT' via a line that also crosses the vertical boundary.

### 3.2.4 TEST RESULTS

#### WCDMA BAND IV

##### FREQUENCY ERROR VS. VOLTAGE

| VOLTAGE (Volts) | FREQUENCY ERROR (ppm) |              | LIMIT (ppm) |
|-----------------|-----------------------|--------------|-------------|
|                 | Low Channel           | High Channel |             |
| $V_{nor}$       | 0.0019                | 0.0016       | 2.5         |
| $V_{min}$       | -0.0022               | 0.0021       | 2.5         |
| $V_{max}$       | 0.0020                | 0.0032       | 2.5         |

**NOTE:** The applicant defined the normal working voltage of the battery is from  $V_{min}$  Vdc to  $V_{max}$  Vdc.

##### FREQUENCY ERROR vs. TEMPERATURE.

| TEMP. (°C) | FREQUENCY ERROR (ppm) |              | LIMIT (ppm) |
|------------|-----------------------|--------------|-------------|
|            | Low Channel           | High Channel |             |
| -30        | -0.0032               | -0.0052      | 2.5         |
| -20        | -0.0046               | -0.0059      | 2.5         |
| -10        | -0.0110               | -0.0026      | 2.5         |
| 0          | -0.0096               | -0.0011      | 2.5         |
| 10         | -0.0075               | 0.0005       | 2.5         |
| 20         | -0.0064               | 0.0011       | 2.5         |
| 30         | -0.0057               | 0.0021       | 2.5         |
| 40         | -0.0052               | 0.0026       | 2.5         |
| 50         | -0.0007               | 0.0042       | 2.5         |

## LTE BAND 7

### FREQUENCY ERROR VS. VOLTAGE

| VOLTAGE (Volts)  | 5MHz                  |              | LIMIT (ppm) |
|------------------|-----------------------|--------------|-------------|
|                  | FREQUENCY ERROR (ppm) |              |             |
|                  | Low Channel           | High Channel |             |
| V <sub>nor</sub> | 0.0021                | 0.0025       | 2.5         |
| V <sub>min</sub> | -0.0023               | -0.003       | 2.5         |
| V <sub>max</sub> | 0.0021                | 0.0021       | 2.5         |

**NOTE:** The applicant defined the normal working voltage of the battery is from  $V_{min}$  Vdc to  $V_{max}$  Vdc.

### FREQUENCY ERROR vs. TEMPERATURE.

| TEMP. (°C) | 5MHz                  |              | LIMIT (ppm) |
|------------|-----------------------|--------------|-------------|
|            | FREQUENCY ERROR (ppm) |              |             |
|            | Low Channel           | High Channel |             |
| -30        | -0.0084               | -0.0084      | 2.5         |
| -20        | -0.0068               | -0.0078      | 2.5         |
| -10        | -0.0080               | -0.0034      | 2.5         |
| 0          | -0.0075               | -0.0074      | 2.5         |
| 10         | -0.0052               | -0.0051      | 2.5         |
| 20         | -0.0042               | -0.0042      | 2.5         |
| 30         | -0.0032               | -0.0042      | 2.5         |
| 40         | -0.0023               | -0.0018      | 2.5         |
| 50         | -0.0006               | -0.0005      | 2.5         |

#### FREQUENCY ERROR VS. VOLTAGE

| VOLTAGE (Volts)  | 10MHz                 |              | LIMIT (ppm) |
|------------------|-----------------------|--------------|-------------|
|                  | FREQUENCY ERROR (ppm) |              |             |
|                  | Low Channel           | High Channel |             |
| V <sub>nor</sub> | 0.0025                | 0.0025       | 2.5         |
| V <sub>min</sub> | -0.0031               | -0.003       | 2.5         |
| V <sub>max</sub> | 0.0024                | 0.0025       | 2.5         |

**NOTE:** The applicant defined the normal working voltage of the battery is from  $V_{min}$  Vdc to  $V_{max}$  Vdc.

#### FREQUENCY ERROR vs. TEMPERATURE.

| TEMP. (°C) | 10MHz                 |              | LIMIT (ppm) |
|------------|-----------------------|--------------|-------------|
|            | FREQUENCY ERROR (ppm) |              |             |
|            | Low Channel           | High Channel |             |
| -30        | -0.0081               | -0.008       | 2.5         |
| -20        | -0.0074               | -0.005       | 2.5         |
| -10        | -0.0068               | -0.007       | 2.5         |
| 0          | -0.0077               | -0.0076      | 2.5         |
| 10         | -0.0045               | -0.005       | 2.5         |
| 20         | -0.004                | -0.0038      | 2.5         |
| 30         | -0.003                | -0.003       | 2.5         |
| 40         | -0.0023               | -0.0017      | 2.5         |
| 50         | -0.0005               | -0.0004      | 2.5         |

#### FREQUENCY ERROR VS. VOLTAGE

| VOLTAGE (Volts)  | 15MHz                 |              | LIMIT (ppm) |
|------------------|-----------------------|--------------|-------------|
|                  | FREQUENCY ERROR (ppm) |              |             |
|                  | Low Channel           | High Channel |             |
| V <sub>nor</sub> | 0.0025                | 0.0026       | 2.5         |
| V <sub>min</sub> | -0.0031               | -0.003       | 2.5         |
| V <sub>max</sub> | 0.0025                | 0.0026       | 2.5         |

**NOTE:** The applicant defined the normal working voltage of the battery is from V<sub>min</sub> Vdc to V<sub>max</sub> Vdc.

#### FREQUENCY ERROR vs. TEMPERATURE.

| TEMP. (°C) | 15MHz                 |              | LIMIT (ppm) |
|------------|-----------------------|--------------|-------------|
|            | FREQUENCY ERROR (ppm) |              |             |
|            | Low Channel           | High Channel |             |
| -30        | -0.0083               | -0.0084      | 2.5         |
| -20        | -0.0056               | -0.0076      | 2.5         |
| -10        | -0.0069               | -0.0072      | 2.5         |
| 0          | -0.0077               | -0.0075      | 2.5         |
| 10         | -0.005                | -0.0053      | 2.5         |
| 20         | -0.0043               | -0.0041      | 2.5         |
| 30         | -0.0036               | -0.0028      | 2.5         |
| 40         | -0.0019               | -0.0022      | 2.5         |
| 50         | -0.0006               | -0.0003      | 2.5         |

#### FREQUENCY ERROR VS. VOLTAGE

| VOLTAGE (Volts)  | 20MHz                 |              | LIMIT (ppm) |
|------------------|-----------------------|--------------|-------------|
|                  | FREQUENCY ERROR (ppm) |              |             |
|                  | Low Channel           | High Channel |             |
| V <sub>nor</sub> | 0.0025                | 0.0025       | 2.5         |
| V <sub>min</sub> | -0.0031               | -0.003       | 2.5         |
| V <sub>max</sub> | 0.0026                | 0.0026       | 2.5         |

**NOTE:** The applicant defined the normal working voltage of the battery is from  $V_{min}$  Vdc to  $V_{max}$  Vdc.

#### FREQUENCY ERROR vs. TEMPERATURE.

| TEMP. (°C) | 20MHz                 |              | LIMIT (ppm) |
|------------|-----------------------|--------------|-------------|
|            | FREQUENCY ERROR (ppm) |              |             |
|            | Low Channel           | High Channel |             |
| -30        | -0.0084               | -0.0083      | 2.5         |
| -20        | -0.0065               | -0.0075      | 2.5         |
| -10        | -0.0049               | -0.0063      | 2.5         |
| 0          | -0.0074               | -0.0073      | 2.5         |
| 10         | -0.0046               | -0.0046      | 2.5         |
| 20         | -0.0038               | -0.0039      | 2.5         |
| 30         | -0.0036               | -0.0039      | 2.5         |
| 40         | -0.0021               | -0.0015      | 2.5         |
| 50         | -0.0002               | -0.0004      | 2.5         |

**LTE BAND CA\_7C**

| LTE BAND CA_7C channel and Frequency List |                        |           |        |        |         |
|-------------------------------------------|------------------------|-----------|--------|--------|---------|
| BW(MHz)                                   | Channel/Frequency(MHz) |           | Lowest | Middle | Highest |
| 10+20                                     | PCC                    | channel   | 20805  | 21006  | 21206   |
|                                           |                        | Frequency | 2505.5 | 2525.6 | 2545.6  |
|                                           | SCC                    | channel   | 20949  | 21150  | 21350   |
|                                           |                        | Frequency | 2519.9 | 2540   | 2560    |
| 15+10                                     | PCC                    | channel   | 20825  | 21051  | 21277   |
|                                           |                        | Frequency | 2507.5 | 2530.1 | 2552.7  |
|                                           | SCC                    | channel   | 20945  | 21171  | 21397   |
|                                           |                        | Frequency | 2519.5 | 2542.1 | 2564.7  |
| 15+15                                     | PCC                    | channel   | 20825  | 21025  | 21225   |
|                                           |                        | Frequency | 2507.5 | 2527.5 | 2547.5  |
|                                           | SCC                    | channel   | 20975  | 21175  | 21375   |
|                                           |                        | Frequency | 2522.5 | 2542.5 | 2562.5  |
| 15+20                                     | PCC                    | channel   | 20828  | 21003  | 21179   |
|                                           |                        | Frequency | 2507.8 | 2525.3 | 2542.9  |
|                                           | SCC                    | channel   | 20999  | 21174  | 21350   |
|                                           |                        | Frequency | 2524.9 | 2542.4 | 2560    |
| 20+10                                     | PCC                    | channel   | 20850  | 21051  | 21251   |
|                                           |                        | Frequency | 2510   | 2530.1 | 2550.1  |
|                                           | SCC                    | channel   | 20994  | 21195  | 21395   |
|                                           |                        | Frequency | 2524.4 | 2544.5 | 2564.5  |
| 20+15                                     | PCC                    | channel   | 20850  | 21026  | 21201   |
|                                           |                        | Frequency | 2510   | 2527.6 | 2545.1  |
|                                           | SCC                    | channel   | 21021  | 21197  | 21372   |
|                                           |                        | Frequency | 2527.1 | 2544.7 | 2562.2  |
| 20+20                                     | PCC                    | channel   | 20850  | 21001  | 21152   |
|                                           |                        | Frequency | 2510   | 2525.1 | 2540.2  |
|                                           | SCC                    | channel   | 21048  | 21199  | 21350   |
|                                           |                        | Frequency | 2529.8 | 2544.9 | 2560    |

**LTE BAND 38**

**FREQUENCY ERROR VS. VOLTAGE**

| VOLTAGE (Volts)  | 5MHz                  |              | LIMIT (ppm) |
|------------------|-----------------------|--------------|-------------|
|                  | FREQUENCY ERROR (ppm) |              |             |
|                  | Low Channel           | High Channel |             |
| V <sub>nor</sub> | 0.0022                | 0.0024       | 2.5         |
| V <sub>min</sub> | -0.0023               | -0.003       | 2.5         |
| V <sub>max</sub> | 0.0021                | 0.002        | 2.5         |

**NOTE:** The applicant defined the normal working voltage of the battery is from  $V_{min}$  Vdc to  $V_{max}$  Vdc.

**FREQUENCY ERROR vs. TEMPERATURE.**

| TEMP. (°C) | 5MHz                  |              | LIMIT (ppm) |
|------------|-----------------------|--------------|-------------|
|            | FREQUENCY ERROR (ppm) |              |             |
|            | Low Channel           | High Channel |             |
| -30        | -0.0084               | -0.0079      | 2.5         |
| -20        | -0.0075               | -0.0062      | 2.5         |
| -10        | -0.0046               | -0.0050      | 2.5         |
| 0          | -0.0074               | -0.0072      | 2.5         |
| 10         | -0.0054               | -0.0047      | 2.5         |
| 20         | -0.004                | -0.0041      | 2.5         |
| 30         | -0.0028               | -0.0029      | 2.5         |
| 40         | -0.0023               | -0.002       | 2.5         |
| 50         | -0.0006               | -0.0004      | 2.5         |

#### FREQUENCY ERROR VS. VOLTAGE

| VOLTAGE (Volts)  | 10MHz                 |              | LIMIT (ppm) |
|------------------|-----------------------|--------------|-------------|
|                  | FREQUENCY ERROR (ppm) |              |             |
|                  | Low Channel           | High Channel |             |
| V <sub>nor</sub> | 0.0025                | 0.0024       | 2.5         |
| V <sub>min</sub> | -0.0031               | -0.0031      | 2.5         |
| V <sub>max</sub> | 0.0025                | 0.0024       | 2.5         |

**NOTE:** The applicant defined the normal working voltage of the battery is from  $V_{min}$  Vdc to  $V_{max}$  Vdc.

#### FREQUENCY ERROR vs. TEMPERATURE.

| TEMP. (°C) | 10MHz                 |              | LIMIT (ppm) |
|------------|-----------------------|--------------|-------------|
|            | FREQUENCY ERROR (ppm) |              |             |
|            | Low Channel           | High Channel |             |
| -30        | -0.0081               | -0.0084      | 2.5         |
| -20        | -0.0042               | -0.0051      | 2.5         |
| -10        | -0.0054               | -0.0064      | 2.5         |
| 0          | -0.0074               | -0.0074      | 2.5         |
| 10         | -0.0056               | -0.0044      | 2.5         |
| 20         | -0.0039               | -0.0037      | 2.5         |
| 30         | -0.0038               | -0.0038      | 2.5         |
| 40         | -0.0023               | -0.0015      | 2.5         |
| 50         | -0.0003               | -0.0005      | 2.5         |

#### FREQUENCY ERROR VS. VOLTAGE

| VOLTAGE (Volts)  | 15MHz                 |              | LIMIT (ppm) |
|------------------|-----------------------|--------------|-------------|
|                  | FREQUENCY ERROR (ppm) |              |             |
|                  | Low Channel           | High Channel |             |
| V <sub>nor</sub> | 0.0026                | 0.0026       | 2.5         |
| V <sub>min</sub> | -0.003                | -0.003       | 2.5         |
| V <sub>max</sub> | 0.0026                | 0.0026       | 2.5         |

**NOTE:** The applicant defined the normal working voltage of the battery is from  $V_{min}$  Vdc to  $V_{max}$  Vdc.

#### FREQUENCY ERROR vs. TEMPERATURE.

| TEMP. (°C) | 15MHz                 |              | LIMIT (ppm) |
|------------|-----------------------|--------------|-------------|
|            | FREQUENCY ERROR (ppm) |              |             |
|            | Low Channel           | High Channel |             |
| -30        | -0.0082               | -0.0083      | 2.5         |
| -20        | -0.0076               | -0.0042      | 2.5         |
| -10        | -0.0038               | -0.0051      | 2.5         |
| 0          | -0.0074               | -0.0073      | 2.5         |
| 10         | -0.0047               | -0.0054      | 2.5         |
| 20         | -0.0041               | -0.0039      | 2.5         |
| 30         | -0.0031               | -0.0032      | 2.5         |
| 40         | -0.0021               | -0.0021      | 2.5         |
| 50         | -0.0005               | -0.0002      | 2.5         |

#### FREQUENCY ERROR VS. VOLTAGE

| VOLTAGE (Volts)  | 20MHz                 |              | LIMIT (ppm) |
|------------------|-----------------------|--------------|-------------|
|                  | FREQUENCY ERROR (ppm) |              |             |
|                  | Low Channel           | High Channel |             |
| V <sub>nor</sub> | 0.0024                | 0.0023       | 2.5         |
| V <sub>min</sub> | -0.003                | -0.003       | 2.5         |
| V <sub>max</sub> | 0.0024                | 0.0024       | 2.5         |

**NOTE:** The applicant defined the normal working voltage of the battery is from  $V_{min}$  Vdc to  $V_{max}$  Vdc.

#### FREQUENCY ERROR vs. TEMPERATURE.

| TEMP. (°C) | 20MHz                 |              | LIMIT (ppm) |
|------------|-----------------------|--------------|-------------|
|            | FREQUENCY ERROR (ppm) |              |             |
|            | Low Channel           | High Channel |             |
| -30        | -0.0082               | -0.0084      | 2.5         |
| -20        | -0.0070               | -0.0055      | 2.5         |
| -10        | -0.0041               | -0.0039      | 2.5         |
| 0          | -0.0077               | -0.0075      | 2.5         |
| 10         | -0.0056               | -0.0052      | 2.5         |
| 20         | -0.004                | -0.0044      | 2.5         |
| 30         | -0.0043               | -0.003       | 2.5         |
| 40         | -0.0022               | -0.0016      | 2.5         |
| 50         | -0.0004               | -0.0006      | 2.5         |

## LTE BAND 41

### FREQUENCY ERROR VS. VOLTAGE

| VOLTAGE (Volts)  | 5MHz                  |              | LIMIT (ppm) |
|------------------|-----------------------|--------------|-------------|
|                  | FREQUENCY ERROR (ppm) |              |             |
|                  | Low Channel           | High Channel |             |
| V <sub>nor</sub> | 0.0021                | 0.0026       | 2.5         |
| V <sub>min</sub> | -0.0023               | -0.003       | 2.5         |
| V <sub>max</sub> | 0.0021                | 0.0021       | 2.5         |

**NOTE:** The applicant defined the normal working voltage of the battery is from  $V_{min}$  Vdc to  $V_{max}$  Vdc.

### FREQUENCY ERROR vs. TEMPERATURE.

| TEMP. (°C) | 5MHz                  |              | LIMIT (ppm) |
|------------|-----------------------|--------------|-------------|
|            | FREQUENCY ERROR (ppm) |              |             |
|            | Low Channel           | High Channel |             |
| -30        | -0.0086               | -0.0082      | 2.5         |
| -20        | -0.0060               | -0.0037      | 2.5         |
| -10        | -0.0065               | -0.0056      | 2.5         |
| 0          | -0.0077               | -0.0073      | 2.5         |
| 10         | -0.0047               | -0.0046      | 2.5         |
| 20         | -0.0038               | -0.0043      | 2.5         |
| 30         | -0.0043               | -0.0034      | 2.5         |
| 40         | -0.0018               | -0.0019      | 2.5         |
| 50         | -0.0003               | -0.0005      | 2.5         |

#### FREQUENCY ERROR VS. VOLTAGE

| VOLTAGE (Volts)  | 10MHz                 |              | LIMIT (ppm) |
|------------------|-----------------------|--------------|-------------|
|                  | FREQUENCY ERROR (ppm) |              |             |
|                  | Low Channel           | High Channel |             |
| V <sub>nor</sub> | 0.0027                | 0.0026       | 2.5         |
| V <sub>min</sub> | -0.0031               | -0.003       | 2.5         |
| V <sub>max</sub> | 0.0024                | 0.0024       | 2.5         |

**NOTE:** The applicant defined the normal working voltage of the battery is from  $V_{min}$  Vdc to  $V_{max}$  Vdc.

#### FREQUENCY ERROR vs. TEMPERATURE.

| TEMP. (°C) | 10MHz                 |              | LIMIT (ppm) |
|------------|-----------------------|--------------|-------------|
|            | FREQUENCY ERROR (ppm) |              |             |
|            | Low Channel           | High Channel |             |
| -30        | -0.0085               | -0.0084      | 2.5         |
| -20        | -0.0074               | -0.0059      | 2.5         |
| -10        | -0.0032               | -0.0038      | 2.5         |
| 0          | -0.0076               | -0.0075      | 2.5         |
| 10         | -0.0053               | -0.0051      | 2.5         |
| 20         | -0.0042               | -0.0043      | 2.5         |
| 30         | -0.0032               | -0.0026      | 2.5         |
| 40         | -0.0019               | -0.002       | 2.5         |
| 50         | -0.0005               | -0.0004      | 2.5         |

#### FREQUENCY ERROR VS. VOLTAGE

| VOLTAGE (Volts)  | 15MHz                 |              | LIMIT (ppm) |
|------------------|-----------------------|--------------|-------------|
|                  | FREQUENCY ERROR (ppm) |              |             |
|                  | Low Channel           | High Channel |             |
| V <sub>nor</sub> | -0.0015               | 0.0025       | 2.5         |
| V <sub>min</sub> | -0.003                | -0.003       | 2.5         |
| V <sub>max</sub> | 0.0025                | 0.0024       | 2.5         |

**NOTE:** The applicant defined the normal working voltage of the battery is from V<sub>min</sub> Vdc to V<sub>max</sub> Vdc.

#### FREQUENCY ERROR vs. TEMPERATURE.

| TEMP. (°C) | 15MHz                 |              | LIMIT (ppm) |
|------------|-----------------------|--------------|-------------|
|            | FREQUENCY ERROR (ppm) |              |             |
|            | Low Channel           | High Channel |             |
| -30        | -0.0082               | -0.0082      | 2.5         |
| -20        | -0.0037               | -0.0054      | 2.5         |
| -10        | -0.0059               | -0.0062      | 2.5         |
| 0          | -0.0077               | -0.0073      | 2.5         |
| 10         | -0.0055               | -0.0051      | 2.5         |
| 20         | -0.0039               | -0.0041      | 2.5         |
| 30         | -0.0041               | -0.0034      | 2.5         |
| 40         | -0.0016               | -0.0022      | 2.5         |
| 50         | -0.0002               | -0.0002      | 2.5         |

#### FREQUENCY ERROR VS. VOLTAGE

| VOLTAGE (Volts)  | 20MHz                 |              | LIMIT (ppm) |
|------------------|-----------------------|--------------|-------------|
|                  | FREQUENCY ERROR (ppm) |              |             |
|                  | Low Channel           | High Channel |             |
| V <sub>nor</sub> | 0.0025                | 0.0025       | 2.5         |
| V <sub>min</sub> | -0.003                | -0.003       | 2.5         |
| V <sub>max</sub> | 0.0024                | 0.0024       | 2.5         |

**NOTE:** The applicant defined the normal working voltage of the battery is from  $V_{min}$  Vdc to  $V_{max}$  Vdc.

#### FREQUENCY ERROR vs. TEMPERATURE.

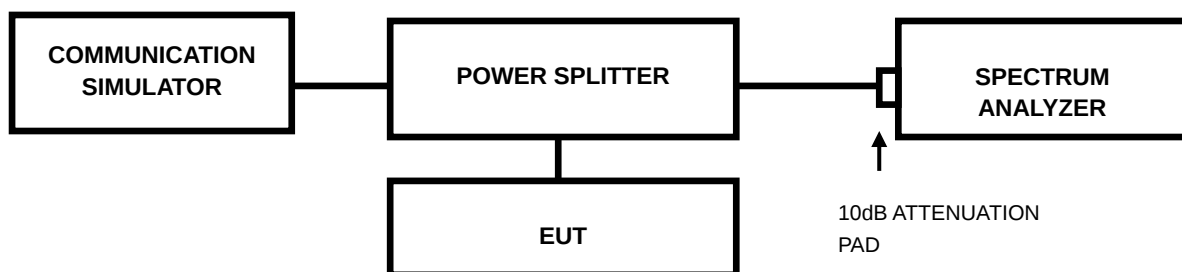
| TEMP. (°C) | 20MHz                 |              | LIMIT (ppm) |
|------------|-----------------------|--------------|-------------|
|            | FREQUENCY ERROR (ppm) |              |             |
|            | Low Channel           | High Channel |             |
| -30        | -0.0085               | -0.0084      | 2.5         |
| -20        | -0.0053               | -0.0049      | 2.5         |
| -10        | -0.0050               | -0.0049      | 2.5         |
| 0          | -0.0076               | -0.0074      | 2.5         |
| 10         | -0.0051               | -0.0055      | 2.5         |
| 20         | -0.0039               | -0.0038      | 2.5         |
| 30         | -0.0034               | -0.0037      | 2.5         |
| 40         | -0.0022               | -0.0017      | 2.5         |
| 50         | -0.0004               | -0.0002      | 2.5         |

### 3.3 OCCUPIED BANDWIDTH MEASUREMENT

#### 3.3.1 LIMITS OF OCCUPIED BANDWIDTH MEASUREMENT

The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5 %of the total mean power of a given emission.

#### 3.3.2 TEST SETUP



#### 3.3.3 TEST PROCEDURES

- The conducted occupied bandwidth used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.
- Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth.

### 3.3.4 TEST RESULTS

#### WCDMA BAND IV

| Channel | FREQ. (MHz) | 99% Occupied Bandwidth (MHz) | Channel | FREQ. (MHz) | 26dB Bandwidth (MHz) |
|---------|-------------|------------------------------|---------|-------------|----------------------|
|         |             | WCDMA                        |         |             | WCDMA                |
| 1312    | 1712.40     | 4.16                         | 1312    | 1712.40     | 4.749                |
| 1413    | 1732.60     | 4.15                         | 1413    | 1732.60     | 4.750                |
| 1513    | 1752.60     | 4.14                         | 1513    | 1752.60     | 4.747                |

