

FCC TEST REPORT

(PART 27)



| | |
|------------|--|
| Applicant: | Xiaomi Communications Co., Ltd. |
| Address: | The Rainbow City of China Resources, NO.68, Qinghe Middle Street, Haidian District, Beijing, China |

| | |
|---------------------------|--|
| Manufacturer or Supplier: | Xiaomi Communications Co., Ltd. |
| Address: | The Rainbow City of China Resources, NO.68, Qinghe Middle Street, Haidian District, Beijing, China |
| Product: | Mobile Phone |
| Brand Name: | XIAOMI |
| Model Name: | M1904F3BG |
| FCC ID: | 2AFZZF3BG |
| Date of tests: | Jul 13, 2019 ~ Aug 07, 2019 |

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 Alex Chen Engineer / Mobile Department | Approved by Luke Lu Manager / Mobile Department |
|  Date: Aug 13, 2019 |  Date: Aug 13, 2019 |

This report is governed by, and incorporates by reference, CPS Conditions of Service as posted at the date of issuance of this report at <http://www.bureauveritas.com/home/about-us/our-business/cps/about-us/terms-conditions> and is intended for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. Measurement uncertainty is only provided upon request for accredited tests. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence or if you require measurement uncertainty; provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.



TABLE OF CONTENTS

| | |
|---|------------|
| RELEASE CONTROL RECORD | 3 |
| 1 SUMMARY OF TEST RESULTS | 4 |
| 1.1 MEASUREMENT UNCERTAINTY | 4 |
| 1.2 TEST SITE AND INSTRUMENTS | 5 |
| 2 GENERAL INFORMATION | 6 |
| 2.1 GENERAL DESCRIPTION OF EUT | 6 |
| 2.2 CONFIGURATION OF SYSTEM UNDER TEST | 10 |
| 2.3 DESCRIPTION OF SUPPORT UNITS | 11 |
| 2.4 TEST ITEM AND TEST CONFIGURATION | 11 |
| 2.5 GENERAL DESCRIPTION OF APPLIED STANDARDS | 17 |
| 3 TEST TYPES AND RESULTS | 18 |
| 3.1 OUTPUT POWER MEASUREMENT | 18 |
| 3.1.1 LIMITS OF OUTPUT POWER MEASUREMENT | 18 |
| 3.1.2 TEST PROCEDURES | 18 |
| 3.1.3 TEST SETUP | 19 |
| 3.1.4 TEST RESULTS | 20 |
| 3.2 FREQUENCY STABILITY MEASUREMENT | 68 |
| 3.2.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT | 68 |
| 3.2.2 TEST PROCEDURE | 68 |
| 3.2.3 TEST SETUP | 68 |
| 3.2.4 TEST RESULTS | 69 |
| 3.3 OCCUPIED BANDWIDTH MEASUREMENT | 77 |
| 3.3.1 LIMITS OF OCCUPIED BANDWIDTH MEASUREMENT | 77 |
| 3.3.2 TEST SETUP | 77 |
| 3.3.3 TEST PROCEDURES | 77 |
| 3.3.4 TEST RESULTS | 78 |
| 3.5 BAND EDGE MEASUREMENT | 95 |
| 3.5.1 LIMITS OF BAND EDGE MEASUREMENT | 95 |
| 3.5.2 TEST SETUP | 95 |
| 3.5.3 TEST PROCEDURES | 96 |
| 3.5.4 TEST RESULTS | 97 |
| 3.6 CONDUCTED SPURIOUS EMISSIONS | 148 |
| 3.6.1 LIMITS OF CONDUCTED SPURIOUS EMISSIONS MEASUREMENT | 148 |
| 3.6.2 TEST PROCEDURE | 148 |
| 3.6.3 TEST SETUP | 148 |
| 3.6.4 TEST RESULTS | 149 |
| 3.7 RADIATED EMISSION MEASUREMENT | 184 |
| 3.7.1 LIMITS OF RADIATED EMISSION MEASUREMENT | 184 |
| 3.7.2 TEST PROCEDURES | 184 |
| 3.7.3 DEVIATION FROM TEST STANDARD | 184 |
| 3.7.4 TEST SETUP | 185 |
| 3.7.5 TEST RESULTS | 186 |
| 4 INFORMATION ON THE TESTING LABORATORIES | 274 |
| 5 APPENDIX A – MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB | 275 |



Test Report No.: RF190712W002-6

RELEASE CONTROL RECORD

| ISSUE NO. | REASON FOR CHANGE | DATE ISSUED |
|----------------|-------------------|--------------|
| RF190712W002-6 | Original release | Aug 13, 2019 |

1 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

| APPLIED STANDARD: FCC Part 27 & Part 2 | | | |
|--|---|--------|--|
| STANDARD SECTION | TEST TYPE AND LIMIT | RESULT | REMARK |
| 2.1046 27.50(h)(2) | Equivalent Isotropically Radiated Power | PASS | Meet the requirement of limit. |
| 2.1055 27.54 | Frequency Stability | PASS | Meet the requirement of limit. |
| 2.1049 27.53(m)(6) | Occupied Bandwidth | PASS | Meet the requirement of limit. |
| 2.1051 27.53(m)(4)(6) | Band Edge Measurements | PASS | Meet the requirement of limit. |
| 2.1051 27.53(m)(4)(6) | Conducted Spurious Emissions | PASS | Meet the requirement of limit. |
| 2.1053 27.53(m)(4)(6) | Radiated Spurious Emissions | PASS | Meet the requirement of limit. Minimum passing margin is -10.82 dB at 46.310MHz. |

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 | ± 76.97Hz |
| Radiated emissions & Radiated Power (30MHz~1GMHz) | ±4.98dB |
| Radiated emissions & Radiated Power (1GMHz ~6GMHz) | ±4.70dB |
| Radiated emissions (6GMHz ~18GMHz) | ±4.60dB |
| Radiated emissions (18GMHz ~40GMHz) | ±4.12dB |
| Conducted emissions | ±4.01dB |
| Occupied Channel Bandwidth | ±43.58KHz |
| Conducted Output power | ±2.06dB |
| Band Edge Measurements | ±4.70dB |

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 | Feb. 26,19 | Feb. 25,20 |
| EXA Signal Analyzer | KEYSIGHT | N9010A-526 | MY54510322 | Feb. 26,19 | Feb. 25,20 |
| Bilog Antenna | ETS-LINDGREN | 3143B | 00161965 | Feb. 26,19 | Feb. 25,20 |
| Horn Antenna (1GHz-18GHz) | ETS-LINDGREN | 3117 | 00168692 | Nov. 30, 18 | Nov. 29, 19 |
| Horn Antenna (18GHz-40GHz) | N/A | QWH-SL-18-40 -K-SG/QMS-00 361 | 15433 | Nov. 21, 18 | Nov. 20, 19 |
| Radio Communication Analyzer | ANRITSU | MT8820C | 6201465426 | Feb. 26,19 | Feb. 25,20 |
| Radio Communication Analyzer | Rohde&Schwarz | CMW500 | 131349 | Feb. 26,19 | Feb. 25,20 |
| Signal Pre-Amplifier | EMSI | EMC 9135 | 980249 | Jun. 24,19 | Jun. 23,20 |
| Signal Pre-Amplifier | EMSI | EMC 012645B | 980257 | Jun. 24,19 | Jun. 23,20 |
| Signal Pre-Amplifier | EMSI | EMC 184045B | 980259 | Jun. 24,19 | Jun. 23,20 |
| 3m Semi-anechoic Chamber | ETS-LINDGREN | 9m*6m*6m | Euroshieldpn- CT0001143-1216 | Feb. 26,19 | Feb. 25,20 |
| Test Software | E3 | V 9.160323 | N/A | N/A | N/A |
| Test Software | ADT | ADT_Radiated _V7.6.15.9.2 | N/A | N/A | N/A |
| 10dB Attenuator | JFW/USA | 50HF-010-SM A | 1505 | Jun. 24,19 | Jun. 23,20 |
| Power Meter | Anritsu | ML2495A | 1506002 | Feb. 26,19 | Feb. 25,20 |
| Power Sensor | Anritsu | MA2411B | 1339352 | Feb. 26,19 | Feb. 25,20 |
| Humid & Temp Programmable Tester | Juyi | ITH-120-45-CP -AR | IAA1504-001 | Jun. 24,19 | Jun. 23,20 |
| MXG Analog Microvave Signal Generator | KEYSIGHT | N5183A | MY50143024 | Feb. 26,19 | Feb. 25,20 |
| Power Divider | MCLI/USA | PS2-15 | 24880 | Jul. 09,19 | Jul. 08,20 |

- NOTE:**
1. The calibration interval of the above test instruments is 12 months or 24 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

| | | |
|------------------------------|---|-----------------------|
| PRODUCT | Mobile Phone | |
| BRAND NAME | XIAOMI | |
| MODEL NAME | M1904F3BG | |
| POWER SUPPLY | 5V/9V/12Vdc (adapter or host equipment) 3.85Vdc (Li-ion, battery) $V_{min}=3.6V, V_{nor}=3.85V, V_{max}=4.4V$ | |
| MODULATION TECHNOLOGY | LTE | QPSK, 16QAM, 64QAM |
| FREQUENCY RANGE | LTE Band 7 Channel Bandwidth: 5MHz | 2502.5MHz ~ 2567.5MHz |
| | LTE Band 7 Channel Bandwidth: 10MHz | 2505MHz ~ 2565MHz |
| | LTE Band 7 Channel Bandwidth: 15MHz | 2507.5MHz ~ 2562.5MHz |
| | LTE Band 7 Channel Bandwidth: 20MHz | 2510MHz ~ 2560MHz |
| | LTE Band 38 Channel Bandwidth: 5MHz | 2572.5MHz ~ 2617.5MHz |
| | LTE Band 38 Channel Bandwidth: 10MHz | 2575MHz ~ 2615MHz |
| | LTE Band 38 Channel Bandwidth: 15MHz | 2577.5MHz ~ 2612.5MHz |
| | LTE Band 38 Channel Bandwidth: 20MHz | 2580MHz ~ 2610MHz |
| | LTE Band CA_7C Channel Bandwidth: 10MHz+20MHz | 2505.5MHz ~ 2545.6MHz |
| | LTE Band CA_7C Channel Bandwidth: 15MHz+10MHz | 2507.5MHz ~ 2552.7MHz |
| | LTE Band CA_7C Channel Bandwidth: 15MHz+15MHz | 2507.5MHz ~ 2547.5MHz |
| | LTE Band CA_7C Channel Bandwidth: 15MHz+20MHz | 2507.8MHz ~ 2542.9MHz |
| | LTE Band CA_7C Channel Bandwidth: 20MHz+10MHz | 2510MHz ~ 2550.1MHz |
| | LTE Band CA_7C Channel Bandwidth: 20MHz+15MHz | 2510MHz ~ 2545.1MHz |



**BUREAU
VERITAS**

Test Report No.: RF190712W002-6

| | | |
|---------------------|--|-----------------------|
| | LTE Band CA_7C Channel Bandwidth: 20MHz+20MHz | 2510MHz ~ 2540.2MHz |
| | LTE Band CA_38C Channel Bandwidth: 15MHz+15MHz | 2577.5MHz ~ 2597.5MHz |
| | LTE Band CA_38C Channel Bandwidth: 20MHz+20MHz | 2580MHz ~ 2590.2MHz |
| EMISSION DESIGNATOR | LTE Band 7 Channel Bandwidth: 5MHz | QPSK: 4M48G7D |
| | | 16QAM: 4M48W7D |
| | | 64QAM: 4M49W7D |
| | LTE Band 7 Channel Bandwidth: 10MHz | QPSK: 8M95G7D |
| | | 16QAM: 8M94W7D |
| | | 64QAM: 8M93W7D |
| | LTE Band 7 Channel Bandwidth: 15MHz | QPSK: 13M4G7D |
| | | 16QAM: 13M4W7D |
| | | 64QAM: 13M4W7D |
| | LTE Band 7 Channel Bandwidth: 20MHz | QPSK: 17M9G7D |
| | | 16QAM: 17M9W7D |
| | | 64QAM: 17M9W7D |
| EMISSION DESIGNATOR | LTE Band CA_7C Channel Bandwidth: 10MHz+20MHz | QPSK: 28M11G7D |
| | | 16QAM: 28M14W7D |
| | | 64QAM: 28M14W7D |
| | LTE Band CA_7C Channel Bandwidth: 15MHz +10MHz | QPSK: 23M65G7D |
| | | 16QAM: 23M66W7D |
| | | 64QAM: 23M66W7D |
| | LTE Band CA_7C Channel Bandwidth: 15MHz +15MHz | QPSK: 28M8G7D |
| | | 16QAM: 28M8W7D |
| | | 64QAM: 28M8W7D |
| | LTE Band CA_7C Channel Bandwidth: 15MHz +20MHz | QPSK: 33M0G7D |
| | | 16QAM: 33M0W7D |
| | | 64QAM: 33M0W7D |
| | LTE Band CA_7C Channel Bandwidth: 20MHz +10MHz | QPSK: 28M2G7D |
| | | 16QAM: 28M2W7D |
| | | 64QAM: 28M2W7D |
| | LTE Band CA_7C Channel Bandwidth: 20MHz +15MHz | QPSK: 33M0G7D |
| | | 16QAM: 33M1W7D |
| | | 64QAM: 32M9W7D |
| | LTE Band CA_7C Channel Bandwidth: 20MHz +20MHz | QPSK: 37M9G7D |
| | | 16QAM: 37M9W7D |
| | | 64QAM: 37M8W7D |
| | LTE Band 38 Channel Bandwidth: 5MHz | QPSK: 4M48G7D |
| | | 16QAM: 4M47W7D |



**BUREAU
VERITAS**

Test Report No.: RF190712W002-6

| | | |
|--|--|--|
| | | 64QAM: 4M49W7D |
| | LTE Band 38 Channel Bandwidth: 10MHz | QPSK: 8M94G7D |
| | | 16QAM: 8M92W7D |
| | | 64QAM: 8M94W7D |
| | LTE Band 38 Channel Bandwidth: 15MHz | QPSK: 14M4G7D |
| | | 16QAM: 13M4W7D |
| | | 64QAM: 13M4W7D |
| | LTE Band 38 Channel Bandwidth: 20MHz | QPSK: 17M9G7D |
| | | 16QAM: 17M9W7D |
| | | 64QAM: 17M9W7D |
| | LTE Band CA_38C Channel Bandwidth: 15MHz+15MHz | QPSK: 28M4G7D |
| | | 16QAM: 28M5W7D |
| 64QAM: 28M5W7D | | |
| LTE Band CA_38C Channel Bandwidth: 20MHz+20MHz | QPSK: 37M5G7D | |
| | 16QAM: 37M5W7D | |
| | 64QAM: 37M5W7D | |
| MAX. EIRP POWER | LTE Band 7 Channel Bandwidth: 5MHz | WWAN-ANT-0: 169mW WWAN-ANT-1: 339mW |
| | LTE Band 7 Channel Bandwidth: 10MHz | WWAN-ANT-0: 177mW WWAN-ANT-1: 367mW |
| | LTE Band 7 Channel Bandwidth: 15MHz | WWAN-ANT-0: 182mW WWAN-ANT-1: 385mW |
| | LTE Band 7 Channel Bandwidth: 20MHz | WWAN-ANT-0: 153mW WWAN-ANT-1: 162mW |
| | LTE Band CA_7C Channel Bandwidth: 10MHz+20MHz | WWAN-ANT-0: 188mW WWAN-ANT-1: 223mW |
| | LTE Band CA_7C Channel Bandwidth: 15MHz+10MHz | WWAN-ANT-0: 202mW WWAN-ANT-1: 222mW |
| | LTE Band CA_7C Channel Bandwidth: 15MHz+15MHz | WWAN-ANT-0: 199mW WWAN-ANT-1: 220mW |
| | LTE Band CA_7C Channel Bandwidth: 15MHz+20MHz | WWAN-ANT-0: 218mW WWAN-ANT-1: 223mW |
| | LTE Band CA_7C Channel Bandwidth: 20MHz+10MHz | WWAN-ANT-0: 214mW WWAN-ANT-1: 220mW |
| | LTE Band CA_7C Channel Bandwidth: 20MHz+15MHz | WWAN-ANT-0: 229mW WWAN-ANT-1: 219mW |
| | LTE Band CA_7C Channel Bandwidth: 20MHz+20MHz | WWAN-ANT-0: 192mW WWAN-ANT-1: 198mW |



BUREAU
VERITAS

Test Report No.: RF190712W002-6

| | | |
|---------------------|--|--|
| | LTE Band 38 Channel Bandwidth: 5MHz | WWAN-ANT-0: 175mW WWAN-ANT-1: 316mW |
| | LTE Band 38 Channel Bandwidth: 10MHz | WWAN-ANT-0: 178mW WWAN-ANT-1: 322mW |
| | LTE Band 38 Channel Bandwidth: 15MHz | WWAN-ANT-0: 173mW WWAN-ANT-1: 314mW |
| | LTE Band 38 Channel Bandwidth: 20MHz | WWAN-ANT-0: 155mW WWAN-ANT-1: 152mW |
| | LTE Band CA_38C Channel Bandwidth: 15MHz+15MHz | WWAN-ANT-0: 217mW WWAN-ANT-1: 283mW |
| | LTE Band CA_38C Channel Bandwidth: 20MHz+20MHz | WWAN-ANT-0: 188mW WWAN-ANT-1: 250mW |
| ANTENNA TYPE | Main Antenna(ANT 0): Fixed Internal Antenna with 0.8dBi gain for LTE Band 7 Fixed Internal Antenna with 0.33dBi gain for LTE Band 38 Diversity Antenna(ANT 1): Fixed Internal Antenna with 0.45dBi gain for LTE Band 7/LTE Band 38 | |
| HW VERSION | P1 | |
| SW VERSION | MIUI 10 | |
| I/O PORTS | Refer to user's manual | |
| DATA CABLE | USB cable: non-shielded, detachable, 1m Earphone cable: non-shielded, detachable, 1.25m | |

NOTE:

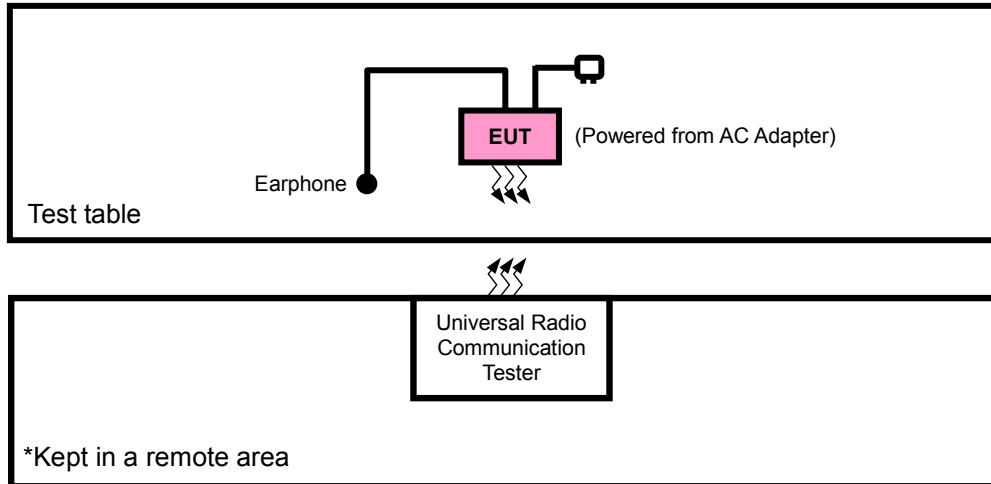
1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
2. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.

List of Accessories:

| ACCESSORIES | BRAND | MODEL | MANUFACTURER | SPECIFICATION |
|-------------|-------|-----------|---|---|
| Battery | MI | BM4F | Sunwoda Electronic Co., Ltd | Rating: 3.85Vdc, 4030mAh |
| AC Adapter | MI | MDY-10-ED | Jiansu Chenyang Electron Co., Ltd | I/P: 100 - 240 Vac, 0.5 A O/P: 5 Vdc, 3A or 9 Vdc, 2 A or 12 Vdc, 1.5A |
| USB Cable 1 | MI | K23312 | Suzhou Keli Science&Technology Development Co., Ltd | 1.0m non-shielded cable, with w/o ferrite core |
| Earphone | MI | EM023 | One More Acoustics Technology Co., Ltd | 1.25m non-shielded cable, with w/o ferrite core |

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 CONFIGURE MODE | DESCRIPTION |
|--------------------|--|
| A | EUT + Adapter + USB Cable + Earphone with LTE link |
| B | EUT + Battery with LTE link |

LTE BAND 7 MODE

| EUT CONFIGURE MODE | TEST ITEM | AVAILABLE CHANNEL | TESTED CHANNEL | CHANNEL BANDWIDTH | 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 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 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 | | |
| | | | 21425 | 5MHz | QPSK, 16QAM, 64QAM | 25 RB / 0 RB Offset | | |
| | | 20800 to 21400 | 20800 | 10MHz | QPSK, 16QAM, 64QAM | 1 RB / 24 RB Offset | | |
| | | | 21400 | 10MHz | QPSK, 16QAM, 64QAM | 25 RB / 0 RB Offset | | |
| | | 20825 to 21375 | 20825 | 15MHz | QPSK, 16QAM, 64QAM | 1 RB / 0 RB Offset | | |
| | | | 21375 | 15MHz | QPSK, 16QAM, 64QAM | 75 RB / 0 RB Offset | | |
| | | 20850 to 21350 | 20850 | 20MHz | QPSK, 16QAM, 64QAM | 1 RB / 49 RB Offset | | |
| | | | 21350 | 20MHz | QPSK, 16QAM, 64QAM | 50 RB / 0 RB Offset | | |
| | | B | CONDCUDET ED 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 EMISSION | 20775 to 21425 | 21100 | 5MHz | QPSK | 1 RB / 0 RB Offset | | |
| | | 20800 to 21400 | 20800, 21100, 21400 | 10MHz | QPSK | 1 RB / 0RB 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 38 MODE

| EUT CONFIGURE MODE | TEST ITEM | AVAILABLE CHANNEL | TESTED CHANNEL | CHANNEL BANDWIDTH | MODULATION | MODE | | |
|--------------------|---------------------|-------------------|-----------------------|-------------------|---------------------|----------------------|------|--------------------|
| B | EIRP | 3775 to 38225 | 3775, 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 to38150 | 37850, 38000, 38150 | 20MHz | QPSK, 16QAM, 64QAM | 1 RB / 0 RB Offset | | |
| B | FREQUENCY STABILITY | 3775 to 38225 | 3775, 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 to38150 | 37850, 38150 | 20MHz | QPSK | 1 RB / 0 RB Offset | | |
| B | OCCUPIED BANDWIDTH | 3775 to 38225 | 3775, 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 to38150 | 37850, 38000, 38150 | 20MHz | QPSK, 16QAM, 64QAM | 100 RB / 0 RB Offset | | |
| B | BAND EDGE | 3775 to 38225 | 3775 | 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 | 75 RB / 0 RB Offset | | |
| | | 37850 to38150 | 37850 | 20MHz | QPSK, 16QAM, 64QAM | 1 RB / 49 RB Offset | | |
| | | | 38150 | 20MHz | QPSK, 16QAM, 64QAM | 50 RB / 0 RB Offset | | |
| | | B | CONDCUDET ED EMISSION | 3775 to 38225 | 3775, 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 to38150 | 37850, 38000, 38150 | 20MHz | QPSK | 1 RB / 0 RB Offset |
| A | RADIATED EMISSION | 3775 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 to38150 | 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 CA_7C MODE

| EUT CONFIGURE MODE | TEST ITEM | AVAILABLE PCC CHANNEL | TESTED CHANNEL | CHANNEL 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 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 |
| | | | 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 |
| | | | 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 |
| | | | 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 |
| | | | 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 |
| | | | 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 | 1RB/ 0RB&1RB/ 74RB Offset 1RB/ 99RB&1RB/ 0RB Offset |



BUREAU
VERITAS

Test Report No.: RF190712W002-6

| | | | | | | |
|---|-----------------------------|----------------|-------------------|-------------|--------------------|------------------------------|
| | | 20850 to 21152 | 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 |
| | | 20850 to 21152 | High | 20MHz+20MHz | QPSK, 16QAM, 64QAM | 100RB/ 0RB&100RB/ 0RB Offset |
| | | | | | | 1RB/ 0RB&1RB/ 99RB Offset |
| | | | | | | 1RB/ 99RB&1RB/ 0RB Offset |
| | | 20805 to 21206 | Low, Middle, High | 10MHz+20MHz | QPSK | 100RB/ 0RB&100RB/ 0RB Offset |
| | | | | | | 1RB/ 0RB&1RB/ 99RB Offset |
| | | | | | | 1RB/ 49RB&1RB/ 0RB Offset |
| B | CONDCUDET ED EMISSION | 20825 to 21277 | Low, Middle, High | 15MHz+10MHz | QPSK | 50RB/ 0RB&100RB/ 0RB Offset |
| | | | | | | 1RB/ 0RB&1RB/ 49RB Offset |
| | | | | | | 1RB/ 74RB&1RB/ 0RB Offset |
| | | 20825 to 21225 | Low, Middle, High | 15MHz+15MHz | QPSK | 75RB/ 0RB&50RB/ 0RB Offset |
| | | | | | | 1RB/ 0RB&1RB/ 74RB Offset |
| | | | | | | 1RB/ 74RB&1RB/ 0RB Offset |
| B | CONDCUDET ED EMISSION | 20828 to 21179 | Low, Middle, High | 15MHz+20MHz | QPSK | 75RB/ 0RB&75RB/ 0RB Offset |
| | | | | | | 1RB/ 0RB&1RB/ 99RB Offset |
| | | | | | | 1RB/ 74RB&1RB/ 0RB Offset |
| | | 20850 to 21251 | Low, Middle, High | 20MHz+10MHz | QPSK | 75RB/ 0RB&100RB/ 0RB Offset |
| | | | | | | 1RB/ 0RB&1RB/ 49RB Offset |
| | | | | | | 1RB/ 99RB&1RB/ 0RB Offset |
| B | CONDCUDET ED EMISSION | 20850 to 21201 | Low, Middle, High | 20MHz+15MHz | QPSK | 100RB/ 0RB&50RB/ 0RB Offset |
| | | | | | | 1RB/ 0RB&1RB/ 74RB Offset |
| | | | | | | 1RB/ 99RB&1RB/ 0RB Offset |
| | | 20850 to 21152 | Low, Middle, High | 20MHz+20MHz | QPSK | 100RB/ 0RB&75RB/ 0RB Offset |
| | | | | | | 1RB/ 0RB&1RB/ 99RB Offset |
| | | | | | | 1RB/ 99RB&1RB/ 0RB Offset |
| A | RADIATED EMISSION | 20805 to 21206 | Low, Middle, High | 10MHz+20MHz | QPSK | 100RB/ 0RB&100RB/ 0RB Offset |
| | | 20825 to 21277 | Low, Middle, High | 15MHz+10MHz | QPSK | 1RB/ 49RB&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 CA_38C MODE

| EUT CONFIGURE MODE | TEST ITEM | AVAILABLE CHANNEL | TESTED CHANNEL | CHANNEL BANDWIDTH | MODULATION | MODE | |
|--------------------|-----------------------------|-------------------|-------------------|-------------------|--------------------|------------------------------|------------------------------|
| B | EIRP | 37825 to 38025 | Low, Middle, High | 15MHz+15MHz | QPSK, 16QAM, 64QAM | 1RB/ 74RB&1RB/ 0RB Offset | |
| | | 37850 to 37952 | Low, Middle, High | 20MHz+20MHz | QPSK, 16QAM, 64QAM | 1RB/ 99RB&1RB/ 0RB Offset | |
| B | OCCUPIED BANDWIDTH | 37825 to 38025 | Low, Middle, High | 15MHz+15MHz | QPSK, 16QAM, 64QAM | 75RB/ 0RB&75RB/ 0RB Offset | |
| | | 37850 to 37952 | Low, Middle, High | 20MHz+20MHz | QPSK, 16QAM, 64QAM | 100RB/ 0RB&100RB/ 0RB Offset | |
| B | BAND EDGE | 37825 to 38025 | Low | 15MHz+15MHz | QPSK, 16QAM, 64QAM | 1RB/ 0RB&1RB/ 74RB Offset | |
| | | | | | | 1RB/ 74RB&1RB/ 0RB Offset | |
| | | | High | 15MHz+15MHz | QPSK, 16QAM, 64QAM | 75RB/ 0RB&75RB/ 0RB Offset | |
| | | | | | | 1RB/ 0RB&1RB/ 74RB Offset | |
| | | 37850 to 37952 | Low | 20MHz+20MHz | QPSK, 16QAM, 64QAM | 1RB/ 74RB&1RB/ 0RB Offset | |
| | | | | | | 1RB/ 99RB&1RB/ 0RB Offset | |
| | | | High | 20MHz+20MHz | QPSK, 16QAM, 64QAM | 100RB/ 0RB&100RB/ 0RB Offset | |
| | | | | | | 1RB/ 0RB&1RB/ 99RB Offset | |
| B | CONDCUDET ED EMISSION | 37825 to 38025 | Low, Middle, High | 15MHz+15MHz | QPSK | 1RB/ 0RB&1RB/ 99RB Offset | |
| | | | | | | 1RB/ 99RB&1RB/ 0RB Offset | |
| | | | | | | 100RB/ 0RB&100RB/ 0RB Offset | |
| | | 37850 to 37952 | Low, Middle, High | 20MHz+20MHz | QPSK | QPSK | 1RB/ 0RB&1RB/ 99RB Offset |
| | | | | | | | 1RB/ 99RB&1RB/ 0RB Offset |
| | | | | | | | 100RB/ 0RB&100RB/ 0RB Offset |
| A | RADIATED EMISSION | 37825 to 38025 | Low, Middle, High | 15MHz+15MHz | QPSK | 1RB/ 74RB&1RB/ 0RB Offset | |
| | | 37850 to 37952 | 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.

TEST CONDITION:

| TEST ITEM | ENVIRONMENTAL CONDITIONS | INPUT POWER | TESTED BY |
|---------------------|--------------------------|---------------------------|----------------------|
| EIRP | 24deg. C, 60%RH | 3.85Vdc from Battery | Star Le & Tony Xiong |
| FREQUENCY STABILITY | 24deg. C, 61%RH | DC 3.6V/3.85V/4.4V | Walker Ye |
| OCCUPIED BANDWIDTH | 24deg. C, 61%RH | 3.85Vdc from Battery | Walker Ye |
| BAND EDGE | 24deg. C, 61%RH | 3.85Vdc from Battery | Walker Ye |
| CONDCUDED EMISSION | 24deg. C, 61%RH | 3.85Vdc from Battery | Walker Ye |
| RADIATED EMISSION | 23deg. C, 70%RH | DC 5V/9V/12V from adaptor | Star Le & Tony Xiong |

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.”

3.1.2 TEST PROCEDURES

EIRP MEASUREMENT:

- a. All measurements were done at low, middle and high operational frequency range. RBW and VBW is 10MHz for LTE mode.
- b. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The “Read Value” is the spectrum reading the maximum power value.
- c. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a tx cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to “Read Value” of step b. Record the power level of S.G.
- d. $EIRP = \text{Output power level of S.G} - \text{TX cable loss} + \text{Antenna gain of substitution horn}$.

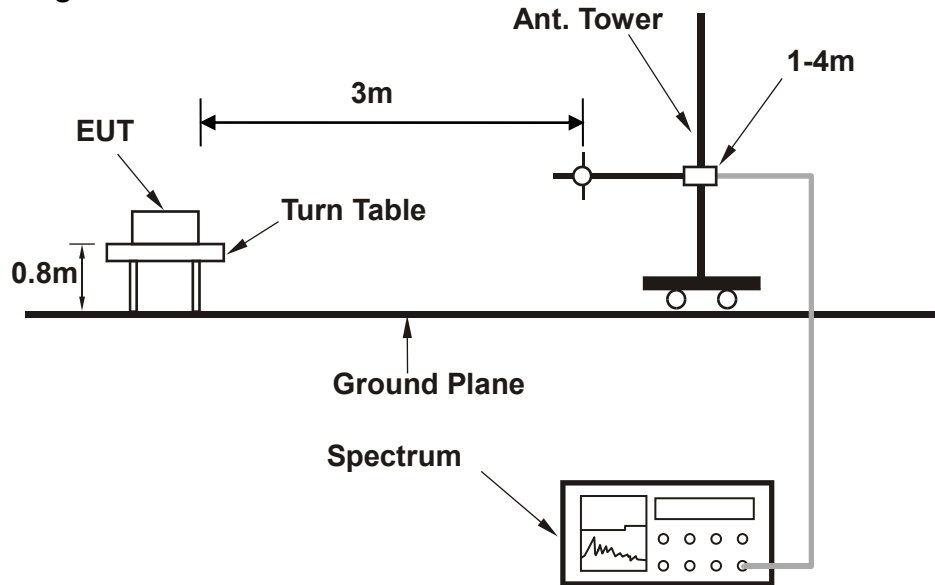
CONDUCTED POWER MEASUREMENT:

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

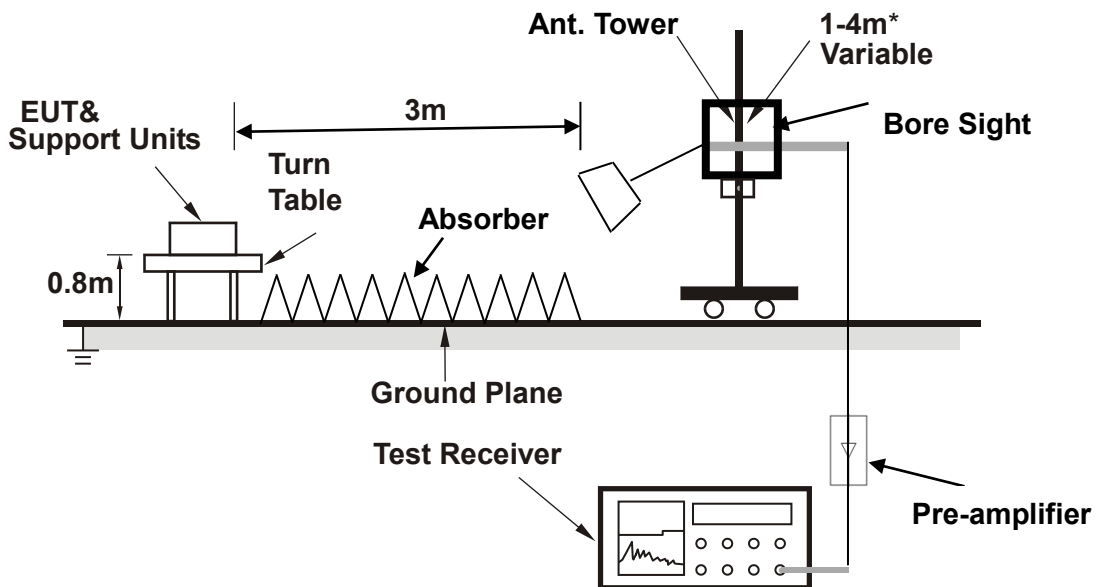
3.1.3 TEST SETUP

EIRP MEASUREMENT:

< Frequency Range 30MHz~1GHz >



<Frequency Range above 1GHz>

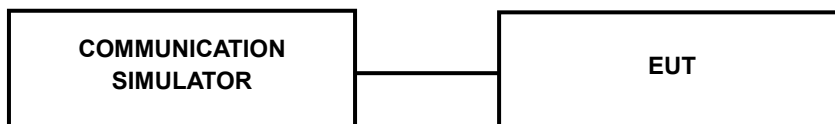


Note: Above 1G is a directional antenna

depends on the EUT height and the antenna 3dB beamwidth both, refer to section 7.3 of CISPR 16-2-3.

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

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)

| LTE Band 7 | | | | | | | |
|------------|------------|---------|-----------|-------------------------|-----------------------|-------------------------|---------------------|
| BW | Modulation | RB Size | RB Offset | Low CH 20775 | Mid CH 21100 | High CH 21425 | 3GPP MPR (dB) |
| | | | | Frequency 2502.5 MHz | Frequency 2535 MHz | Frequency 2567.5 MHz | |
| 5MHz | QPSK | 1 | 0 | 22.19 | 22.29 | 22.20 | 0 |
| | | 1 | 12 | 22.27 | 22.33 | 22.28 | 0 |
| | | 1 | 24 | 22.11 | 22.20 | 22.16 | 0 |
| | | 12 | 0 | 21.17 | 21.28 | 21.17 | 1 |
| | | 12 | 6 | 21.15 | 21.34 | 21.19 | 1 |
| | | 12 | 13 | 21.21 | 21.32 | 21.25 | 1 |
| | | 25 | 0 | 21.19 | 21.35 | 21.21 | 1 |
| | 16QAM | 1 | 0 | 21.46 | 21.60 | 21.52 | 1 |
| | | 1 | 12 | 21.40 | 21.58 | 21.44 | 1 |
| | | 1 | 24 | 21.45 | 21.51 | 21.46 | 1 |
| | | 12 | 0 | 20.12 | 20.26 | 20.13 | 2 |
| | | 12 | 6 | 20.17 | 20.33 | 20.18 | 2 |
| | | 12 | 13 | 20.16 | 20.30 | 20.22 | 2 |
| | | 25 | 0 | 20.16 | 20.27 | 20.18 | 2 |
| | 64QAM | 1 | 0 | 20.16 | 20.30 | 20.22 | 2 |
| | | 1 | 12 | 20.18 | 20.36 | 20.21 | 2 |
| | | 1 | 24 | 20.12 | 20.31 | 20.19 | 2 |
| | | 12 | 0 | 19.29 | 19.40 | 19.26 | 3 |
| | | 12 | 6 | 19.28 | 19.47 | 19.35 | 3 |
| | | 12 | 13 | 19.28 | 19.39 | 19.25 | 3 |
| | | 25 | 0 | 19.32 | 19.48 | 19.36 | 3 |

| LTE Band 7 | | | | | | | |
|------------|------------|---------|-----------|-----------------------|-----------------------|-----------------------|---------------------|
| BW | Modulation | RB Size | RB Offset | Low CH 20800 | Mid CH 21100 | High CH 21400 | 3GPP MPR (dB) |
| | | | | Frequency 2505 MHz | Frequency 2535 MHz | Frequency 2565 MHz | |
| 10MHz | QPSK | 1 | 0 | 22.16 | 22.32 | 22.20 | 0 |
| | | 1 | 24 | 22.27 | 22.33 | 22.29 | 0 |
| | | 1 | 49 | 22.08 | 22.24 | 22.12 | 0 |
| | | 25 | 0 | 21.18 | 21.27 | 21.20 | 1 |
| | | 25 | 12 | 21.21 | 21.28 | 21.19 | 1 |
| | | 25 | 25 | 21.19 | 21.29 | 21.24 | 1 |
| | | 50 | 0 | 21.24 | 21.35 | 21.18 | 1 |
| | 16QAM | 1 | 0 | 21.46 | 21.57 | 21.48 | 1 |
| | | 1 | 24 | 21.45 | 21.54 | 21.47 | 1 |
| | | 1 | 49 | 21.45 | 21.52 | 21.43 | 1 |
| | | 25 | 0 | 20.14 | 20.24 | 20.19 | 2 |
| | | 25 | 12 | 20.21 | 20.27 | 20.23 | 2 |
| | | 25 | 25 | 20.15 | 20.31 | 20.19 | 2 |
| | | 50 | 0 | 20.20 | 20.26 | 20.22 | 2 |
| | 64QAM | 1 | 0 | 20.15 | 20.31 | 20.19 | 2 |
| | | 1 | 24 | 20.23 | 20.32 | 20.25 | 2 |
| | | 1 | 49 | 20.18 | 20.25 | 20.16 | 2 |
| | | 25 | 0 | 19.27 | 19.37 | 19.32 | 3 |
| | | 25 | 12 | 19.35 | 19.46 | 19.29 | 3 |
| | | 25 | 25 | 19.27 | 19.36 | 19.27 | 3 |
| | | 50 | 0 | 19.37 | 19.44 | 19.37 | 3 |

| LTE Band 7 | | | | | | | |
|------------|------------|---------|-----------|-------------------------|-----------------------|-------------------------|---------------------|
| BW | Modulation | RB Size | RB Offset | Low CH 20825 | Mid CH 21100 | High CH 21375 | 3GPP MPR (dB) |
| | | | | Frequency 2507.5 MHz | Frequency 2535 MHz | Frequency 2562.5 MHz | |
| 15MHz | QPSK | 1 | 0 | 22.23 | 22.32 | 22.17 | 0 |
| | | 1 | 37 | 22.25 | 22.38 | 22.24 | 0 |
| | | 1 | 74 | 22.14 | 22.27 | 22.13 | 0 |
| | | 36 | 0 | 21.15 | 21.28 | 21.21 | 1 |
| | | 36 | 19 | 21.22 | 21.33 | 21.19 | 1 |
| | | 36 | 39 | 21.17 | 21.30 | 21.24 | 1 |
| | | 75 | 0 | 21.24 | 21.33 | 21.23 | 1 |
| | 16QAM | 1 | 0 | 21.50 | 21.64 | 21.48 | 1 |
| | | 1 | 37 | 21.44 | 21.55 | 21.47 | 1 |
| | | 1 | 74 | 21.41 | 21.57 | 21.45 | 1 |
| | | 36 | 0 | 20.18 | 20.24 | 20.20 | 2 |
| | | 36 | 19 | 20.15 | 20.31 | 20.19 | 2 |
| | | 36 | 39 | 20.20 | 20.29 | 20.22 | 2 |
| | | 75 | 0 | 20.21 | 20.29 | 20.15 | 2 |
| | 64QAM | 1 | 0 | 20.17 | 20.32 | 20.20 | 2 |
| | | 1 | 37 | 20.24 | 20.31 | 20.22 | 2 |
| | | 1 | 74 | 20.14 | 20.24 | 20.19 | 2 |
| | | 36 | 0 | 19.32 | 19.43 | 19.26 | 3 |
| | | 36 | 19 | 19.29 | 19.40 | 19.31 | 3 |
| | | 36 | 39 | 19.30 | 19.43 | 19.29 | 3 |
| | | 75 | 0 | 19.36 | 19.42 | 19.38 | 3 |

| LTE Band 7 | | | | | | | |
|------------|------------|---------|-----------|-----------------------|-----------------------|-----------------------|---------------------|
| BW | Modulation | RB Size | RB Offset | Low CH 20850 | Mid CH 21100 | High CH 21350 | 3GPP MPR (dB) |
| | | | | Frequency 2510 MHz | Frequency 2535 MHz | Frequency 2560 MHz | |
| 20MHz | QPSK | 1 | 0 | 22.24 | 22.36 | 22.25 | 0 |
| | | 1 | 50 | 22.29 | 22.41 | 22.30 | 0 |
| | | 1 | 99 | 22.16 | 22.28 | 22.17 | 0 |
| | | 50 | 0 | 21.21 | 21.33 | 21.22 | 1 |
| | | 50 | 25 | 21.23 | 21.35 | 21.24 | 1 |
| | | 50 | 50 | 21.25 | 21.37 | 21.26 | 1 |
| | | 100 | 0 | 21.25 | 21.37 | 21.26 | 1 |
| | 16QAM | 1 | 0 | 21.53 | 21.65 | 21.54 | 1 |
| | | 1 | 50 | 21.48 | 21.60 | 21.49 | 1 |
| | | 1 | 99 | 21.47 | 21.59 | 21.48 | 1 |
| | | 50 | 0 | 20.20 | 20.32 | 20.21 | 2 |
| | | 50 | 25 | 20.23 | 20.35 | 20.24 | 2 |
| | | 50 | 50 | 20.23 | 20.35 | 20.24 | 2 |
| | | 100 | 0 | 20.22 | 20.34 | 20.23 | 2 |
| | 64QAM | 1 | 0 | 20.23 | 20.35 | 20.24 | 2 |
| | | 1 | 50 | 20.26 | 20.38 | 20.27 | 2 |
| | | 1 | 99 | 20.20 | 20.32 | 20.21 | 2 |
| | | 50 | 0 | 19.33 | 19.45 | 19.34 | 3 |
| | | 50 | 25 | 19.36 | 19.48 | 19.37 | 3 |
| | | 50 | 50 | 19.32 | 19.44 | 19.33 | 3 |
| | | 100 | 0 | 19.38 | 19.50 | 19.39 | 3 |

| LTE Band 38 | | | | | | | |
|-------------|------------|---------|-----------|-------------------------|-----------------------|------------------------|---------------------|
| BW | Modulation | RB Size | RB Offset | Low CH 37775 | Mid CH 38000 | High CH 38225 | 3GPP MPR (dB) |
| | | | | Frequency 2572.5 MHz | Frequency 2595 MHz | Frequency 2617.5MHz | |
| 5MHz | QPSK | 1 | 0 | 22.57 | 22.38 | 22.51 | 0 |
| | | 1 | 12 | 22.48 | 22.25 | 22.42 | 0 |
| | | 1 | 24 | 22.44 | 22.24 | 22.42 | 0 |
| | | 12 | 0 | 21.46 | 21.28 | 21.39 | 1 |
| | | 12 | 6 | 21.46 | 21.36 | 21.43 | 1 |
| | | 12 | 13 | 21.47 | 21.29 | 21.44 | 1 |
| | | 25 | 0 | 21.48 | 21.35 | 21.43 | 1 |
| | 16QAM | 1 | 0 | 21.49 | 21.34 | 21.48 | 1 |
| | | 1 | 12 | 21.42 | 21.31 | 21.39 | 1 |
| | | 1 | 24 | 21.46 | 21.23 | 21.40 | 1 |
| | | 12 | 0 | 20.47 | 20.32 | 20.41 | 2 |
| | | 12 | 6 | 20.48 | 20.35 | 20.42 | 2 |
| | | 12 | 13 | 20.43 | 20.28 | 20.42 | 2 |
| | | 25 | 0 | 20.45 | 20.27 | 20.40 | 2 |
| | 64QAM | 1 | 0 | 20.52 | 20.37 | 20.51 | 2 |
| | | 1 | 12 | 20.46 | 20.35 | 20.42 | 2 |
| | | 1 | 24 | 20.52 | 20.42 | 20.52 | 2 |
| | | 12 | 0 | 19.51 | 19.33 | 19.41 | 3 |
| | | 12 | 6 | 19.44 | 19.34 | 19.44 | 3 |
| | | 12 | 13 | 19.52 | 19.34 | 19.42 | 3 |
| | | 25 | 0 | 19.52 | 19.39 | 19.49 | 3 |

| LTE Band 38 | | | | | | | |
|-------------|------------|---------|-----------|-----------------------|-----------------------|-----------------------|---------------------|
| BW | Modulation | RB Size | RB Offset | Low CH 37800 | Mid CH 38000 | High CH 38200 | 3GPP MPR (dB) |
| | | | | Frequency 2575 MHz | Frequency 2595 MHz | Frequency 2615 MHz | |
| 10MHz | QPSK | 1 | 0 | 22.54 | 22.41 | 22.51 | 0 |
| | | 1 | 24 | 22.48 | 22.25 | 22.43 | 0 |
| | | 1 | 49 | 22.41 | 22.28 | 22.38 | 0 |
| | | 25 | 0 | 21.47 | 21.27 | 21.42 | 1 |
| | | 25 | 12 | 21.52 | 21.30 | 21.43 | 1 |
| | | 25 | 25 | 21.45 | 21.26 | 21.43 | 1 |
| | | 50 | 0 | 21.53 | 21.35 | 21.40 | 1 |
| | 16QAM | 1 | 0 | 21.49 | 21.31 | 21.44 | 1 |
| | | 1 | 24 | 21.47 | 21.27 | 21.42 | 1 |
| | | 1 | 49 | 21.46 | 21.24 | 21.37 | 1 |
| | | 25 | 0 | 20.49 | 20.30 | 20.47 | 2 |
| | | 25 | 12 | 20.52 | 20.29 | 20.47 | 2 |
| | | 25 | 25 | 20.42 | 20.29 | 20.39 | 2 |
| | | 50 | 0 | 20.49 | 20.26 | 20.44 | 2 |
| | 64QAM | 1 | 0 | 20.51 | 20.38 | 20.48 | 2 |
| | | 1 | 24 | 20.51 | 20.31 | 20.46 | 2 |
| | | 1 | 49 | 20.58 | 20.36 | 20.49 | 2 |
| | | 25 | 0 | 19.49 | 19.30 | 19.47 | 3 |
| | | 25 | 12 | 19.51 | 19.33 | 19.38 | 3 |
| | | 25 | 25 | 19.51 | 19.31 | 19.44 | 3 |
| | | 50 | 0 | 19.57 | 19.35 | 19.50 | 3 |

| LTE Band 38 | | | | | | | |
|-------------|------------|---------|-----------|-------------------------|-----------------------|------------------------|---------------------|
| BW | Modulation | RB Size | RB Offset | Low CH 37825 | Mid CH 38000 | High CH 38175 | 3GPP MPR (dB) |
| | | | | Frequency 2577.5 MHz | Frequency 2595 MHz | Frequency 2612.5MHz | |
| 15MHz | QPSK | 1 | 0 | 22.61 | 22.41 | 22.48 | 0 |
| | | 1 | 37 | 22.46 | 22.30 | 22.38 | 0 |
| | | 1 | 74 | 22.47 | 22.31 | 22.39 | 0 |
| | | 36 | 0 | 21.44 | 21.28 | 21.43 | 1 |
| | | 36 | 19 | 21.53 | 21.35 | 21.43 | 1 |
| | | 36 | 39 | 21.43 | 21.27 | 21.43 | 1 |
| | | 75 | 0 | 21.53 | 21.33 | 21.45 | 1 |
| | 16QAM | 1 | 0 | 21.53 | 21.38 | 21.44 | 1 |
| | | 1 | 37 | 21.46 | 21.28 | 21.42 | 1 |
| | | 1 | 74 | 21.42 | 21.29 | 21.39 | 1 |
| | | 36 | 0 | 20.53 | 20.30 | 20.48 | 2 |
| | | 36 | 19 | 20.46 | 20.33 | 20.43 | 2 |
| | | 36 | 39 | 20.47 | 20.27 | 20.42 | 2 |
| | | 75 | 0 | 20.50 | 20.29 | 20.37 | 2 |
| | 64QAM | 1 | 0 | 20.53 | 20.39 | 20.49 | 2 |
| | | 1 | 37 | 20.52 | 20.30 | 20.43 | 2 |
| | | 1 | 74 | 20.54 | 20.35 | 20.52 | 2 |
| | | 36 | 0 | 19.54 | 19.36 | 19.41 | 3 |
| | | 36 | 19 | 19.45 | 19.27 | 19.40 | 3 |
| | | 36 | 39 | 19.54 | 19.38 | 19.46 | 3 |
| | | 75 | 0 | 19.56 | 19.33 | 19.51 | 3 |

| LTE Band 38 | | | | | | | |
|-------------|------------|---------|-----------|-----------------------|-----------------------|-----------------------|---------------------|
| BW | Modulation | RB Size | RB Offset | Low CH 37850 | Mid CH 38000 | High CH 38150 | 3GPP MPR (dB) |
| | | | | Frequency 2580 MHz | Frequency 2595 MHz | Frequency 2610 MHz | |
| 20MHz | QPSK | 1 | 0 | 22.62 | 22.45 | 22.56 | 0 |
| | | 1 | 50 | 22.50 | 22.33 | 22.44 | 0 |
| | | 1 | 99 | 22.49 | 22.32 | 22.43 | 0 |
| | | 50 | 0 | 21.50 | 21.33 | 21.44 | 1 |
| | | 50 | 25 | 21.54 | 21.37 | 21.48 | 1 |
| | | 50 | 50 | 21.51 | 21.34 | 21.45 | 1 |
| | | 100 | 0 | 21.54 | 21.37 | 21.48 | 1 |
| | 16QAM | 1 | 0 | 21.56 | 21.39 | 21.50 | 1 |
| | | 1 | 50 | 21.50 | 21.33 | 21.44 | 1 |
| | | 1 | 99 | 21.48 | 21.31 | 21.42 | 1 |
| | | 50 | 0 | 20.55 | 20.38 | 20.49 | 2 |
| | | 50 | 25 | 20.54 | 20.37 | 20.48 | 2 |
| | | 50 | 50 | 20.50 | 20.33 | 20.44 | 2 |
| | | 100 | 0 | 20.51 | 20.34 | 20.45 | 2 |
| | 64QAM | 1 | 0 | 20.59 | 20.42 | 20.53 | 2 |
| | | 1 | 50 | 20.54 | 20.37 | 20.48 | 2 |
| | | 1 | 99 | 20.60 | 20.43 | 20.54 | 2 |
| | | 50 | 0 | 19.55 | 19.38 | 19.49 | 3 |
| | | 50 | 25 | 19.52 | 19.35 | 19.46 | 3 |
| | | 50 | 50 | 19.56 | 19.39 | 19.50 | 3 |
| | | 100 | 0 | 19.58 | 19.41 | 19.52 | 3 |

| 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 | 49 | 1 | 0 | 2 | 22.15 |
| | | 16QAM | 1 | 49 | 1 | 0 | 2 | 21.35 |
| | | 64QAM | 1 | 49 | 1 | 0 | 2 | 20.21 |
| 21006 | 21150 | QPSK | 1 | 49 | 1 | 0 | 2 | 22.06 |
| | | 16QAM | 1 | 49 | 1 | 0 | 2 | 21.45 |
| | | 64QAM | 1 | 49 | 1 | 0 | 2 | 20.30 |
| 21206 | 21350 | QPSK | 1 | 49 | 1 | 0 | 2 | 22.16 |
| | | 16QAM | 1 | 49 | 1 | 0 | 2 | 21.48 |
| | | 64QAM | 1 | 49 | 1 | 0 | 2 | 20.36 |
| 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 | 22.15 |
| | | 16QAM | 1 | 74 | 1 | 0 | 2 | 21.33 |
| | | 64QAM | 1 | 74 | 1 | 0 | 2 | 20.17 |
| 21051 | 21171 | QPSK | 1 | 74 | 1 | 0 | 2 | 22.02 |
| | | 16QAM | 1 | 74 | 1 | 0 | 2 | 21.47 |
| | | 64QAM | 1 | 74 | 1 | 0 | 2 | 20.23 |
| 21277 | 21397 | QPSK | 1 | 74 | 1 | 0 | 2 | 22.10 |
| | | 16QAM | 1 | 74 | 1 | 0 | 2 | 21.52 |
| | | 64QAM | 1 | 74 | 1 | 0 | 2 | 20.39 |

| 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 | 22.17 |
| | | 16QAM | 1 | 74 | 1 | 0 | 2 | 21.36 |
| | | 64QAM | 1 | 74 | 1 | 0 | 2 | 20.20 |
| 21025 | 21175 | QPSK | 1 | 74 | 1 | 0 | 2 | 22.01 |
| | | 16QAM | 1 | 74 | 1 | 0 | 2 | 21.45 |
| | | 64QAM | 1 | 74 | 1 | 0 | 2 | 20.21 |
| 21225 | 21375 | QPSK | 1 | 74 | 1 | 0 | 2 | 22.16 |
| | | 16QAM | 1 | 74 | 1 | 0 | 2 | 21.55 |
| | | 64QAM | 1 | 74 | 1 | 0 | 2 | 20.35 |
| 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 | 22.21 |
| | | 16QAM | 1 | 74 | 1 | 0 | 2 | 21.48 |
| | | 64QAM | 1 | 74 | 1 | 0 | 2 | 20.34 |
| 21003 | 21174 | QPSK | 1 | 74 | 1 | 0 | 2 | 22.15 |
| | | 16QAM | 1 | 74 | 1 | 0 | 2 | 21.49 |
| | | 64QAM | 1 | 74 | 1 | 0 | 2 | 20.47 |
| 21179 | 21350 | QPSK | 1 | 74 | 1 | 0 | 2 | 22.18 |
| | | 16QAM | 1 | 74 | 1 | 0 | 2 | 21.29 |
| | | 64QAM | 1 | 74 | 1 | 0 | 2 | 20.42 |

| 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 | 22.19 |
| | | 16QAM | 1 | 99 | 1 | 0 | 2 | 21.43 |
| | | 64QAM | 1 | 99 | 1 | 0 | 2 | 20.24 |
| 21051 | 21195 | QPSK | 1 | 99 | 1 | 0 | 2 | 22.07 |
| | | 16QAM | 1 | 99 | 1 | 0 | 2 | 21.51 |
| | | 64QAM | 1 | 99 | 1 | 0 | 2 | 20.31 |
| 21251 | 21395 | QPSK | 1 | 99 | 1 | 0 | 2 | 22.17 |
| | | 16QAM | 1 | 99 | 1 | 0 | 2 | 21.57 |
| | | 64QAM | 1 | 99 | 1 | 0 | 2 | 20.38 |
| 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 | 22.09 |
| | | 16QAM | 1 | 99 | 1 | 0 | 2 | 21.52 |
| | | 64QAM | 1 | 99 | 1 | 0 | 2 | 20.37 |
| 21026 | 21197 | QPSK | 1 | 99 | 1 | 0 | 2 | 22.15 |
| | | 16QAM | 1 | 99 | 1 | 0 | 2 | 21.47 |
| | | 64QAM | 1 | 99 | 1 | 0 | 2 | 20.56 |
| 21201 | 21372 | QPSK | 1 | 99 | 1 | 0 | 2 | 22.11 |
| | | 16QAM | 1 | 99 | 1 | 0 | 2 | 21.32 |
| | | 64QAM | 1 | 99 | 1 | 0 | 2 | 20.41 |

| CA_7C | | | | | | | | |
|---------------------------------------|-------------|------------|---------|-----------|---------|-----------|---------------|----------------------|
| Combination 20MHz+20MHz (100RB+100RB) | | | | | | | | |
| PCC Channel | SCC Channel | Modulation | | | | | Total RB Size | Measured Power (dBm) |
| | | | RB Size | RB offset | RB Size | RB offset | | |
| 20850 | 21048 | QPSK | 0 | 0 | 1 | 99 | 1 | 22.10 |
| | | | 1 | 0 | 0 | 0 | 1 | 22.12 |
| | | | 1 | 99 | 1 | 0 | 2 | 22.15 |
| | | 16QAM | 0 | 0 | 1 | 99 | 1 | 21.60 |
| | | | 1 | 0 | 0 | 0 | 1 | 21.58 |
| | | | 1 | 99 | 1 | 0 | 2 | 21.51 |
| | | 64QAM | 0 | 0 | 1 | 99 | 1 | 20.32 |
| | | | 1 | 0 | 0 | 0 | 1 | 20.31 |
| | | | 1 | 99 | 1 | 0 | 2 | 20.24 |
| 21001 | 21199 | QPSK | 0 | 0 | 1 | 99 | 1 | 22.20 |
| | | | 1 | 0 | 0 | 0 | 1 | 22.21 |
| | | | 1 | 99 | 1 | 0 | 2 | 22.27 |
| | | 16QAM | 0 | 0 | 1 | 99 | 1 | 21.57 |
| | | | 1 | 0 | 0 | 0 | 1 | 21.54 |
| | | | 1 | 99 | 1 | 0 | 2 | 21.52 |
| | | 64QAM | 0 | 0 | 1 | 99 | 1 | 20.31 |
| | | | 1 | 0 | 0 | 0 | 1 | 20.32 |
| | | | 1 | 99 | 1 | 0 | 2 | 20.25 |
| 21152 | 21350 | QPSK | 0 | 0 | 1 | 99 | 1 | 22.11 |
| | | | 1 | 0 | 0 | 0 | 1 | 22.11 |
| | | | 1 | 99 | 1 | 0 | 2 | 22.15 |
| | | 16QAM | 0 | 0 | 1 | 99 | 1 | 21.60 |
| | | | 1 | 0 | 0 | 0 | 1 | 21.58 |
| | | | 1 | 99 | 1 | 0 | 2 | 21.51 |
| | | 64QAM | 0 | 0 | 1 | 99 | 1 | 20.30 |
| | | | 1 | 0 | 0 | 0 | 1 | 20.36 |
| | | | 1 | 99 | 1 | 0 | 2 | 20.31 |

| CA_38C | | | | | | | | |
|-------------------------------------|---------|------------|---------|-----------|---------|-----------|---------------|----------------------|
| 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 | | |
| 37825 | 37975 | QPSK | 1 | 74 | 1 | 0 | 2 | 22.39 |
| | | 16QAM | 1 | 74 | 1 | 0 | 2 | 21.37 |
| | | 64QAM | 1 | 74 | 1 | 0 | 2 | 20.35 |
| 37925 | 38075 | QPSK | 1 | 74 | 1 | 0 | 2 | 22.37 |
| | | 16QAM | 1 | 74 | 1 | 0 | 2 | 21.36 |
| | | 64QAM | 1 | 74 | 1 | 0 | 2 | 20.36 |
| 38025 | 38175 | QPSK | 1 | 74 | 1 | 0 | 2 | 22.37 |
| | | 16QAM | 1 | 74 | 1 | 0 | 2 | 21.33 |
| | | 64QAM | 1 | 74 | 1 | 0 | 2 | 20.39 |

| CA_38C | | | | | | | | |
|---------------------------------------|-------------|------------|---------|-----------|---------|-----------|---------------|----------------------|
| 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 | | |
| 37850 | 38048 | QPSK | 0 | 0 | 1 | 99 | 1 | 22.45 |
| | | | 1 | 0 | 0 | 0 | 1 | 22.33 |
| | | | 1 | 99 | 1 | 0 | 2 | 22.48 |
| | | 16QAM | 0 | 0 | 1 | 99 | 1 | 21.39 |
| | | | 1 | 0 | 0 | 0 | 1 | 21.33 |
| | | | 1 | 99 | 1 | 0 | 2 | 21.31 |
| | | 64QAM | 0 | 0 | 1 | 99 | 1 | 20.42 |
| | | | 1 | 0 | 0 | 0 | 1 | 20.37 |
| | | | 1 | 99 | 1 | 0 | 2 | 20.43 |
| 37901 | 38099 | QPSK | 0 | 0 | 1 | 99 | 1 | 22.28 |
| | | | 1 | 0 | 0 | 0 | 1 | 22.30 |
| | | | 1 | 99 | 1 | 0 | 2 | 22.31 |
| | | 16QAM | 0 | 0 | 1 | 99 | 1 | 21.44 |
| | | | 1 | 0 | 0 | 0 | 1 | 21.42 |
| | | | 1 | 99 | 1 | 0 | 2 | 21.39 |
| | | 64QAM | 0 | 0 | 1 | 99 | 1 | 20.49 |
| | | | 1 | 0 | 0 | 0 | 1 | 20.43 |
| | | | 1 | 99 | 1 | 0 | 2 | 20.52 |
| 37952 | 38150 | QPSK | 0 | 0 | 1 | 99 | 1 | 22.33 |
| | | | 1 | 0 | 0 | 0 | 1 | 22.32 |
| | | | 1 | 99 | 1 | 0 | 2 | 22.41 |
| | | 16QAM | 0 | 0 | 1 | 99 | 1 | 21.56 |
| | | | 1 | 0 | 0 | 0 | 1 | 21.50 |
| | | | 1 | 99 | 1 | 0 | 2 | 21.48 |
| | | 64QAM | 0 | 0 | 1 | 99 | 1 | 20.55 |
| | | | 1 | 0 | 0 | 0 | 1 | 20.54 |
| | | | 1 | 99 | 1 | 0 | 2 | 20.50 |

WWAN- ANT- 0

EIRP

LTE BAND 7

CHANNEL BANDWIDTH: 5MHz QPSK

| Channel | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) | Limit (W) |
|---------|-----------------|---------------|-----------------------|-----------|---------------|--------------------|-----------|
| 20775 | 2502.5 | -27.13 | 45.65 | 18.52 | 71.09 | H | 2 |
| 21100 | 2535.0 | -26.96 | 46.04 | 19.08 | 80.82 | H | 2 |
| 21425 | 2567.5 | -26.02 | 45.87 | 19.85 | 96.52 | H | 2 |
| 20775 | 2502.5 | -24.96 | 47.03 | 22.07 | 160.99 | V | 2 |
| 21100 | 2535.0 | -24.56 | 46.57 | 22.01 | 158.85 | V | 2 |
| 21425 | 2567.5 | -24.71 | 46.98 | 22.27 | 168.66 | V | 2 |

CHANNEL BANDWIDTH: 5MHz 16QAM

| Channel | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) | Limit (W) |
|---------|-----------------|---------------|-----------------------|-----------|----------|--------------------|-----------|
| 20775 | 2502.5 | -27.96 | 45.65 | 17.69 | 58.72 | H | 2 |
| 21100 | 2535.0 | -27.98 | 46.04 | 18.06 | 63.90 | H | 2 |
| 21425 | 2567.5 | -27.12 | 45.87 | 18.75 | 74.92 | H | 2 |
| 20775 | 2502.5 | -25.79 | 47.03 | 21.24 | 132.98 | V | 2 |
| 21100 | 2535.0 | -25.58 | 46.57 | 20.99 | 125.60 | V | 2 |
| 21425 | 2567.5 | -25.81 | 46.98 | 21.17 | 130.92 | V | 2 |

CHANNEL BANDWIDTH: 5MHz 64QAM

| Channel | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) | Limit (W) |
|---------|-----------------|---------------|-----------------------|-----------|----------|--------------------|-----------|
| 20775 | 2502.5 | -29.96 | 45.65 | 15.69 | 37.05 | H | 2 |
| 21100 | 2535.0 | -29.96 | 46.04 | 16.08 | 40.50 | H | 2 |
| 21425 | 2567.5 | -29.12 | 45.87 | 16.75 | 47.27 | H | 2 |
| 20775 | 2502.5 | -27.85 | 47.03 | 19.18 | 82.76 | V | 2 |
| 21100 | 2535.0 | -27.62 | 46.57 | 18.95 | 78.52 | V | 2 |
| 21425 | 2567.5 | -27.83 | 46.98 | 19.15 | 82.22 | V | 2 |

CHANNEL BANDWIDTH: 10MHz QPSK

| Channel | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) | Limit (W) |
|---------|-----------------|---------------|-----------------------|-----------|---------------|--------------------|-----------|
| 20800 | 2505.0 | -26.94 | 45.65 | 18.71 | 74.28 | H | 2 |
| 21100 | 2535.0 | -26.90 | 46.04 | 19.14 | 81.94 | H | 2 |
| 21400 | 2565.0 | -25.89 | 46.07 | 20.18 | 104.11 | H | 2 |
| 20800 | 2505.0 | -24.77 | 47.18 | 22.41 | 174.02 | V | 2 |
| 21100 | 2535.0 | -24.50 | 46.57 | 22.07 | 161.06 | V | 2 |
| 21400 | 2565.0 | -24.58 | 47.06 | 22.48 | 177.17 | V | 2 |

CHANNEL BANDWIDTH: 10MHz 16QAM

| Channel | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) | Limit (W) |
|---------|-----------------|---------------|-----------------------|-----------|----------|--------------------|-----------|
| 20800 | 2505.0 | -28.09 | 45.65 | 17.56 | 57.00 | H | 2 |
| 21100 | 2535.0 | -28.00 | 46.04 | 18.04 | 63.61 | H | 2 |
| 21400 | 2565.0 | -27.05 | 46.07 | 19.02 | 79.71 | H | 2 |
| 20800 | 2505.0 | -25.92 | 47.18 | 21.26 | 133.54 | V | 2 |
| 21100 | 2535.0 | -25.60 | 46.57 | 20.97 | 125.03 | V | 2 |
| 21400 | 2565.0 | -25.74 | 47.06 | 21.32 | 135.64 | V | 2 |

CHANNEL BANDWIDTH: 10MHz 64QAM

| Channel | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) | Limit (W) |
|---------|-----------------|---------------|-----------------------|-----------|----------|--------------------|-----------|
| 20800 | 2505.0 | -30.19 | 45.65 | 15.46 | 35.15 | H | 2 |
| 21100 | 2535.0 | -29.96 | 46.04 | 16.08 | 40.50 | H | 2 |
| 21400 | 2565.0 | -29.14 | 46.07 | 16.93 | 49.26 | H | 2 |
| 20800 | 2505.0 | -28.05 | 47.18 | 19.13 | 81.77 | V | 2 |
| 21100 | 2535.0 | -27.56 | 46.57 | 19.01 | 79.62 | V | 2 |
| 21400 | 2565.0 | -27.77 | 47.06 | 19.29 | 85.00 | V | 2 |

CHANNEL BANDWIDTH: 15MHz QPSK

| Channel | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) | Limit (W) |
|---------|-----------------|---------------|-----------------------|-----------|---------------|--------------------|-----------|
| 20825 | 2507.5 | -26.95 | 45.63 | 18.68 | 73.84 | H | 2 |
| 21100 | 2535.0 | -26.97 | 46.04 | 19.07 | 80.63 | H | 2 |
| 21375 | 2562.5 | -25.96 | 45.94 | 19.98 | 99.49 | H | 2 |
| 20825 | 2507.5 | -24.78 | 47.39 | 22.61 | 182.35 | V | 2 |
| 21100 | 2535.0 | -24.57 | 46.57 | 22.00 | 158.49 | V | 2 |
| 21375 | 2562.5 | -24.65 | 47.00 | 22.35 | 171.75 | V | 2 |

CHANNEL BANDWIDTH: 15MHz 16QAM

| Channel | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) | Limit (W) |
|---------|-----------------|---------------|-----------------------|-----------|----------|--------------------|-----------|
| 20825 | 2507.5 | -27.81 | 45.63 | 17.82 | 60.58 | H | 2 |
| 21100 | 2535.0 | -27.84 | 46.04 | 18.20 | 65.99 | H | 2 |
| 21375 | 2562.5 | -26.81 | 45.94 | 19.13 | 81.81 | H | 2 |
| 20825 | 2507.5 | -25.64 | 47.39 | 21.75 | 149.59 | V | 2 |
| 21100 | 2535.0 | -25.44 | 46.57 | 21.13 | 129.72 | V | 2 |
| 21375 | 2562.5 | -25.50 | 47.00 | 21.50 | 141.22 | V | 2 |

CHANNEL BANDWIDTH: 15MHz 64QAM

| Channel | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) | Limit (W) |
|---------|-----------------|---------------|-----------------------|-----------|----------|--------------------|-----------|
| 20825 | 2507.5 | -29.86 | 45.63 | 15.77 | 37.78 | H | 2 |
| 21100 | 2535.0 | -27.89 | 46.04 | 18.15 | 65.24 | H | 2 |
| 21375 | 2562.5 | -28.90 | 45.94 | 17.04 | 50.56 | H | 2 |
| 20825 | 2507.5 | -27.67 | 47.39 | 19.72 | 93.73 | V | 2 |
| 21100 | 2535.0 | -27.50 | 46.57 | 19.07 | 80.72 | V | 2 |
| 21375 | 2562.5 | -27.58 | 47.00 | 19.42 | 87.48 | V | 2 |

CHANNEL BANDWIDTH: 20MHz QPSK

| Channel | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) | Limit (W) |
|---------|-----------------|---------------|-----------------------|-----------|---------------|--------------------|-----------|
| 20850 | 2510.0 | -27.53 | 45.80 | 18.27 | 67.13 | H | 2 |
| 21100 | 2535.0 | -27.42 | 46.04 | 18.62 | 72.69 | H | 2 |
| 21350 | 2560.0 | -26.54 | 45.83 | 19.29 | 84.98 | H | 2 |
| 20850 | 2510.0 | -25.36 | 47.21 | 21.85 | 153.11 | V | 2 |
| 21100 | 2535.0 | -25.02 | 46.57 | 21.55 | 142.76 | V | 2 |
| 21350 | 2560.0 | -25.23 | 47.07 | 21.84 | 152.72 | V | 2 |

CHANNEL BANDWIDTH: 20MHz 16QAM

| Channel | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) | Limit (W) |
|---------|-----------------|---------------|-----------------------|-----------|----------|--------------------|-----------|
| 20850 | 2510.0 | -28.46 | 45.80 | 17.34 | 54.19 | H | 2 |
| 21100 | 2535.0 | -28.49 | 46.04 | 17.55 | 56.82 | H | 2 |
| 21350 | 2560.0 | -27.37 | 45.83 | 18.46 | 70.19 | H | 2 |
| 20850 | 2510.0 | -26.29 | 47.21 | 20.92 | 123.59 | V | 2 |
| 21100 | 2535.0 | -26.09 | 46.57 | 20.48 | 111.58 | V | 2 |
| 21350 | 2560.0 | -26.06 | 47.07 | 21.01 | 126.15 | V | 2 |

CHANNEL BANDWIDTH: 20MHz 64QAM

| Channel | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) | Limit (W) |
|---------|-----------------|---------------|-----------------------|-----------|----------|--------------------|-----------|
| 20850 | 2510.0 | -30.54 | 45.80 | 15.26 | 33.57 | H | 2 |
| 21100 | 2535.0 | -30.59 | 46.04 | 15.45 | 35.03 | H | 2 |
| 21350 | 2560.0 | -29.72 | 45.83 | 16.11 | 40.86 | H | 2 |
| 20850 | 2510.0 | -28.36 | 47.21 | 18.85 | 76.74 | V | 2 |
| 21100 | 2535.0 | -28.17 | 46.57 | 18.40 | 69.12 | V | 2 |
| 21350 | 2560.0 | -28.17 | 47.07 | 18.90 | 77.61 | V | 2 |

REMARKS: 1. EIRP Output Power (dBm) = SPA LVL (dBm) + Correction Factor (dB).
 2. Correction factor (dB) = Free Space Loss + Antenna Factor + Cable Loss

LTE BAND 38

CHANNEL BANDWIDTH: 5MHz QPSK

| Channel | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) | Limit (W) |
|---------|-----------------|---------------|-----------------------|-----------|---------------|--------------------|-----------|
| 37775 | 2572.5 | -26.31 | 45.91 | 19.60 | 91.20 | H | 2 |
| 38000 | 2595.0 | -25.79 | 46.04 | 20.25 | 105.93 | H | 2 |
| 38225 | 2617.5 | -26.94 | 46.23 | 19.29 | 84.92 | H | 2 |
| 37775 | 2572.5 | -25.16 | 46.92 | 21.76 | 149.97 | V | 2 |
| 38000 | 2595.0 | -24.75 | 47.10 | 22.35 | 171.79 | V | 2 |
| 38225 | 2617.5 | -24.84 | 47.26 | 22.42 | 174.58 | V | 2 |

CHANNEL BANDWIDTH: 5MHz 16QAM

| Channel | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) | Limit (W) |
|---------|-----------------|---------------|-----------------------|-----------|----------|--------------------|-----------|
| 37775 | 2572.5 | -27.14 | 45.91 | 18.77 | 75.34 | H | 2 |
| 38000 | 2595.0 | -26.81 | 46.04 | 19.23 | 83.75 | H | 2 |
| 38225 | 2617.5 | -28.04 | 46.23 | 18.19 | 65.92 | H | 2 |
| 37775 | 2572.5 | -25.99 | 46.92 | 20.93 | 123.88 | V | 2 |
| 38000 | 2595.0 | -25.77 | 47.10 | 21.33 | 135.83 | V | 2 |
| 38225 | 2617.5 | -25.94 | 47.26 | 21.32 | 135.52 | V | 2 |

CHANNEL BANDWIDTH: 5MHz 64QAM

| Channel | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) | Limit (W) |
|---------|-----------------|---------------|-----------------------|-----------|----------|--------------------|-----------|
| 37775 | 2572.5 | -29.23 | 45.91 | 16.68 | 46.56 | H | 2 |
| 38000 | 2595.0 | -28.85 | 46.04 | 17.19 | 52.36 | H | 2 |
| 38225 | 2617.5 | -30.14 | 46.23 | 16.09 | 40.64 | H | 2 |
| 37775 | 2572.5 | -28.08 | 46.92 | 18.84 | 76.56 | V | 2 |
| 38000 | 2595.0 | -27.80 | 47.10 | 19.30 | 85.11 | V | 2 |
| 38225 | 2617.5 | -27.99 | 47.26 | 19.27 | 84.53 | V | 2 |

CHANNEL BANDWIDTH: 10MHz QPSK

| Channel | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) | Limit (W) |
|---------|-----------------|---------------|-----------------------|-----------|---------------|--------------------|-----------|
| 37800 | 2575.0 | -26.12 | 45.96 | 19.84 | 96.38 | H | 2 |
| 38000 | 2595.0 | -25.73 | 46.04 | 20.31 | 107.40 | H | 2 |
| 38200 | 2615.0 | -26.81 | 46.18 | 19.37 | 86.50 | H | 2 |
| 37800 | 2575.0 | -24.97 | 46.99 | 22.02 | 159.22 | V | 2 |
| 38000 | 2595.0 | -24.69 | 47.10 | 22.41 | 174.18 | V | 2 |
| 38200 | 2615.0 | -24.71 | 47.21 | 22.50 | 177.83 | V | 2 |

CHANNEL BANDWIDTH: 10MHz 16QAM

| Channel | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) | Limit (W) |
|---------|-----------------|---------------|-----------------------|-----------|----------|--------------------|-----------|
| 37800 | 2575.0 | -27.27 | 45.96 | 18.69 | 73.96 | H | 2 |
| 38000 | 2595.0 | -26.83 | 46.04 | 19.21 | 83.37 | H | 2 |
| 38200 | 2615.0 | -27.97 | 46.18 | 18.21 | 66.22 | H | 2 |
| 37800 | 2575.0 | -26.12 | 46.99 | 20.87 | 122.18 | V | 2 |
| 38000 | 2595.0 | -25.79 | 47.10 | 21.31 | 135.21 | V | 2 |
| 38200 | 2615.0 | -25.87 | 47.21 | 21.34 | 136.14 | V | 2 |

CHANNEL BANDWIDTH: 10MHz 64QAM

| Channel | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) | Limit (W) |
|---------|-----------------|---------------|-----------------------|-----------|----------|--------------------|-----------|
| 37800 | 2575.0 | -29.37 | 45.96 | 16.59 | 45.60 | H | 2 |
| 38000 | 2595.0 | -28.83 | 46.04 | 17.21 | 52.60 | H | 2 |
| 38200 | 2615.0 | -29.99 | 46.18 | 16.19 | 41.59 | H | 2 |
| 37800 | 2575.0 | -28.14 | 46.99 | 18.85 | 76.74 | V | 2 |
| 38000 | 2595.0 | -27.81 | 47.10 | 19.29 | 84.92 | V | 2 |
| 38200 | 2615.0 | -27.93 | 47.21 | 19.28 | 84.72 | V | 2 |

CHANNEL BANDWIDTH: 15MHz QPSK

| Channel | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) | Limit (W) |
|---------|-----------------|---------------|-----------------------|-----------|---------------|--------------------|-----------|
| 37825 | 2577.5 | -26.13 | 46.01 | 19.88 | 97.27 | H | 2 |
| 38000 | 2595.0 | -25.80 | 46.04 | 20.24 | 105.68 | H | 2 |
| 38175 | 2612.5 | -26.88 | 46.14 | 19.26 | 84.33 | H | 2 |
| 37825 | 2577.5 | -24.98 | 47.03 | 22.05 | 160.32 | V | 2 |
| 38000 | 2595.0 | -24.76 | 47.10 | 22.34 | 171.40 | V | 2 |
| 38175 | 2612.5 | -24.78 | 47.17 | 22.39 | 173.38 | V | 2 |

CHANNEL BANDWIDTH: 15MHz 16QAM

| Channel | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) | Limit (W) |
|---------|-----------------|---------------|-----------------------|-----------|----------|--------------------|-----------|
| 37825 | 2577.5 | -26.99 | 46.01 | 19.02 | 79.80 | H | 2 |
| 38000 | 2595.0 | -26.67 | 46.04 | 19.37 | 86.50 | H | 2 |
| 38175 | 2612.5 | -27.73 | 46.14 | 18.41 | 69.34 | H | 2 |
| 37825 | 2577.5 | -25.84 | 47.03 | 21.19 | 131.52 | V | 2 |
| 38000 | 2595.0 | -25.63 | 47.10 | 21.47 | 140.28 | V | 2 |
| 38175 | 2612.5 | -25.63 | 47.17 | 21.54 | 142.56 | V | 2 |

CHANNEL BANDWIDTH: 15MHz 64QAM

| Channel | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) | Limit (W) |
|---------|-----------------|---------------|-----------------------|-----------|----------|--------------------|-----------|
| 37825 | 2577.5 | -26.89 | 46.01 | 19.12 | 81.66 | H | 2 |
| 38000 | 2595.0 | -28.77 | 46.04 | 17.27 | 53.33 | H | 2 |
| 38175 | 2612.5 | -29.76 | 46.14 | 16.38 | 43.45 | H | 2 |
| 37825 | 2577.5 | -27.85 | 47.03 | 19.18 | 82.79 | V | 2 |
| 38000 | 2595.0 | -28.13 | 47.10 | 18.97 | 78.89 | V | 2 |
| 38175 | 2612.5 | -28.62 | 47.17 | 18.55 | 71.61 | V | 2 |

CHANNEL BANDWIDTH: 20MHz QPSK

| Channel | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) | Limit (W) |
|---------|-----------------|---------------|-----------------------|-----------|---------------|--------------------|-----------|
| 37850 | 2580.0 | -26.71 | 46.05 | 19.34 | 85.90 | H | 2 |
| 38000 | 2595.0 | -26.25 | 46.04 | 19.79 | 95.28 | H | 2 |
| 38150 | 2610.0 | -27.46 | 46.11 | 18.65 | 73.28 | H | 2 |
| 37850 | 2580.0 | -25.56 | 47.07 | 21.51 | 141.58 | V | 2 |
| 38000 | 2595.0 | -25.21 | 47.10 | 21.89 | 154.53 | V | 2 |
| 38150 | 2610.0 | -25.36 | 47.13 | 21.77 | 150.31 | V | 2 |

CHANNEL BANDWIDTH: 20MHz 16QAM

| Channel | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) | Limit (W) |
|---------|-----------------|---------------|-----------------------|-----------|----------|--------------------|-----------|
| 37850 | 2580.0 | -27.64 | 46.05 | 18.41 | 69.34 | H | 2 |
| 38000 | 2595.0 | -27.32 | 46.04 | 18.72 | 74.47 | H | 2 |
| 38150 | 2610.0 | -28.29 | 46.11 | 17.82 | 60.53 | H | 2 |
| 37850 | 2580.0 | -26.49 | 47.07 | 20.58 | 114.29 | V | 2 |
| 38000 | 2595.0 | -26.28 | 47.10 | 20.82 | 120.78 | V | 2 |
| 38150 | 2610.0 | -26.19 | 47.13 | 20.94 | 124.17 | V | 2 |

CHANNEL BANDWIDTH: 20MHz 64QAM

| Channel | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) | Limit (W) |
|---------|-----------------|---------------|-----------------------|-----------|----------|--------------------|-----------|
| 37850 | 2580.0 | -29.71 | 46.05 | 16.34 | 43.05 | H | 2 |
| 38000 | 2595.0 | -29.33 | 46.04 | 16.71 | 46.88 | H | 2 |
| 38150 | 2610.0 | -30.33 | 46.11 | 15.78 | 37.84 | H | 2 |
| 37850 | 2580.0 | -28.54 | 47.07 | 18.53 | 71.29 | V | 2 |
| 38000 | 2595.0 | -28.44 | 47.10 | 18.66 | 73.45 | V | 2 |
| 38150 | 2610.0 | -28.32 | 47.13 | 18.81 | 76.03 | V | 2 |



BUREAU
VERITAS

Test Report No.: RF190712W002-6

LTE BAND CA_7C

CHANNEL BANDWIDTH: 10MHz+20MHz QPSK

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|---------------|--------------------|-----------|
| 20805 | 2505.5 | 20949 | 2519.9 | -26.08 | 45.65 | 19.57 | 90.53 | H | 2 |
| 21006 | 2525.6 | 21150 | 2540.0 | -26.25 | 46.04 | 19.79 | 95.17 | H | 2 |
| 21206 | 2545.6 | 21350 | 2560.0 | -27.13 | 45.87 | 18.74 | 74.75 | H | 2 |
| 20805 | 2505.5 | 20949 | 2519.9 | -24.28 | 47.03 | 22.75 | 188.28 | V | 2 |
| 21006 | 2525.6 | 21150 | 2540.0 | -24.95 | 46.57 | 21.62 | 145.21 | V | 2 |
| 21206 | 2545.6 | 21350 | 2560.0 | -26.20 | 46.98 | 20.78 | 119.67 | V | 2 |

CHANNEL BANDWIDTH: 10MHz+20MHz 16QAM

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|-----------|--------------------|-----------|
| 20805 | 2505.5 | 20949 | 2519.9 | -26.99 | 45.65 | 18.66 | 73.42 | H | 2 |
| 21006 | 2525.6 | 21150 | 2540.0 | -27.16 | 46.04 | 18.88 | 77.18 | H | 2 |
| 21206 | 2545.6 | 21350 | 2560.0 | -28.04 | 45.87 | 17.83 | 60.62 | H | 2 |
| 20805 | 2505.5 | 20949 | 2519.9 | -25.19 | 47.03 | 21.84 | 152.69 | V | 2 |
| 21006 | 2525.6 | 21150 | 2540.0 | -25.86 | 46.57 | 20.71 | 117.76 | V | 2 |
| 21206 | 2545.6 | 21350 | 2560.0 | -27.11 | 46.98 | 19.87 | 97.05 | V | 2 |

CHANNEL BANDWIDTH: 10MHz+20MHz 64QAM

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|-----------|--------------------|-----------|
| 20805 | 2505.5 | 20949 | 2519.9 | -27.27 | 45.65 | 18.38 | 68.83 | H | 2 |
| 21006 | 2525.6 | 21150 | 2540.0 | -27.47 | 46.04 | 18.57 | 71.86 | H | 2 |
| 21206 | 2545.6 | 21350 | 2560.0 | -28.49 | 45.87 | 17.38 | 54.65 | H | 2 |
| 20805 | 2505.5 | 20949 | 2519.9 | -25.48 | 47.03 | 21.55 | 142.82 | V | 2 |
| 21006 | 2525.6 | 21150 | 2540.0 | -26.18 | 46.57 | 20.39 | 109.40 | V | 2 |
| 21206 | 2545.6 | 21350 | 2560.0 | -27.57 | 46.98 | 19.41 | 87.30 | V | 2 |

CHANNEL BANDWIDTH: 15MHz+10MHz QPSK

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|---------------|--------------------|-----------|
| 20825 | 2507.5 | 20945 | 2519.5 | -25.78 | 45.65 | 19.87 | 97.01 | H | 2 |
| 21051 | 2530.1 | 21171 | 2542.1 | -25.95 | 46.04 | 20.09 | 101.98 | H | 2 |
| 21277 | 2552.7 | 21397 | 2564.7 | -26.83 | 45.87 | 19.04 | 80.09 | H | 2 |
| 20825 | 2507.5 | 20945 | 2519.5 | -23.98 | 47.03 | 23.05 | 201.74 | V | 2 |
| 21051 | 2530.1 | 21171 | 2542.1 | -24.65 | 46.57 | 21.92 | 155.60 | V | 2 |
| 21277 | 2552.7 | 21397 | 2564.7 | -25.90 | 46.98 | 21.08 | 128.23 | V | 2 |

CHANNEL BANDWIDTH: 15MHz+10MHz 16QAM

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|-----------|--------------------|-----------|
| 20825 | 2507.5 | 20945 | 2519.5 | -26.94 | 45.65 | 18.71 | 74.27 | H | 2 |
| 21051 | 2530.1 | 21171 | 2542.1 | -27.11 | 46.04 | 18.93 | 78.07 | H | 2 |
| 21277 | 2552.7 | 21397 | 2564.7 | -27.99 | 45.87 | 17.88 | 61.32 | H | 2 |
| 20825 | 2507.5 | 20945 | 2519.5 | -25.14 | 47.03 | 21.89 | 154.45 | V | 2 |
| 21051 | 2530.1 | 21171 | 2542.1 | -25.81 | 46.57 | 20.76 | 119.12 | V | 2 |
| 21277 | 2552.7 | 21397 | 2564.7 | -27.06 | 46.98 | 19.92 | 98.17 | V | 2 |

CHANNEL BANDWIDTH: 15MHz+10MHz 64QAM

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|-----------|--------------------|-----------|
| 20825 | 2507.5 | 20945 | 2519.5 | -27.33 | 45.65 | 18.32 | 67.89 | H | 2 |
| 21051 | 2530.1 | 21171 | 2542.1 | -27.50 | 46.04 | 18.54 | 71.37 | H | 2 |
| 21277 | 2552.7 | 21397 | 2564.7 | -28.55 | 45.87 | 17.32 | 53.90 | H | 2 |
| 20825 | 2507.5 | 20945 | 2519.5 | -25.52 | 47.03 | 21.51 | 141.51 | V | 2 |
| 21051 | 2530.1 | 21171 | 2542.1 | -26.18 | 46.57 | 20.39 | 109.40 | V | 2 |
| 21277 | 2552.7 | 21397 | 2564.7 | -27.61 | 46.98 | 19.37 | 86.50 | V | 2 |

CHANNEL BANDWIDTH: 15MHz+15MHz QPSK

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|---------------|--------------------|-----------|
| 20825 | 2507.5 | 20975 | 2522.5 | -25.84 | 45.65 | 19.81 | 95.68 | H | 2 |
| 21025 | 2527.5 | 21175 | 2542.5 | -26.01 | 46.04 | 20.03 | 100.58 | H | 2 |
| 21225 | 2547.5 | 21375 | 2562.5 | -26.89 | 45.87 | 18.98 | 79.00 | H | 2 |
| 20825 | 2507.5 | 20975 | 2522.5 | -24.04 | 47.03 | 22.99 | 198.98 | V | 2 |
| 21025 | 2527.5 | 21175 | 2542.5 | -24.71 | 46.57 | 21.86 | 153.46 | V | 2 |
| 21225 | 2547.5 | 21375 | 2562.5 | -25.96 | 46.98 | 21.02 | 126.47 | V | 2 |

CHANNEL BANDWIDTH: 15MHz+15MHz 16QAM

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|-----------|--------------------|-----------|
| 20825 | 2507.5 | 20975 | 2522.5 | -26.61 | 45.65 | 19.04 | 80.13 | H | 2 |
| 21025 | 2527.5 | 21175 | 2542.5 | -26.97 | 46.04 | 19.07 | 80.63 | H | 2 |
| 21225 | 2547.5 | 21375 | 2562.5 | -27.93 | 45.87 | 17.94 | 62.17 | H | 2 |
| 20825 | 2507.5 | 20975 | 2522.5 | -24.81 | 47.03 | 22.22 | 166.65 | V | 2 |
| 21025 | 2527.5 | 21175 | 2542.5 | -25.67 | 46.57 | 20.90 | 123.03 | V | 2 |
| 21225 | 2547.5 | 21375 | 2562.5 | -27.00 | 46.98 | 19.98 | 99.54 | V | 2 |

CHANNEL BANDWIDTH: 15MHz+15MHz 64QAM

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|-----------|--------------------|-----------|
| 20825 | 2507.5 | 20975 | 2522.5 | -27.39 | 45.65 | 18.26 | 66.96 | H | 2 |
| 21025 | 2527.5 | 21175 | 2542.5 | -27.75 | 46.04 | 18.29 | 67.38 | H | 2 |
| 21225 | 2547.5 | 21375 | 2562.5 | -28.70 | 45.87 | 17.17 | 52.07 | H | 2 |
| 20825 | 2507.5 | 20975 | 2522.5 | -25.66 | 47.03 | 21.37 | 137.03 | V | 2 |
| 21025 | 2527.5 | 21175 | 2542.5 | -26.43 | 46.57 | 20.14 | 103.28 | V | 2 |
| 21225 | 2547.5 | 21375 | 2562.5 | -27.83 | 46.98 | 19.15 | 82.22 | V | 2 |



Test Report No.: RF190712W002-6

CHANNEL BANDWIDTH: 15MHz+20MHz QPSK

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|---------------|--------------------|-----------|
| 20828 | 2507.8 | 20999 | 2524.9 | -25.59 | 45.65 | 20.06 | 101.37 | H | 2 |
| 21003 | 2525.3 | 21174 | 2542.4 | -25.89 | 46.04 | 20.15 | 103.40 | H | 2 |
| 21179 | 2542.9 | 21350 | 2560.0 | -26.70 | 46.07 | 19.37 | 86.40 | H | 2 |
| 20828 | 2507.8 | 20999 | 2524.9 | -23.79 | 47.18 | 23.39 | 218.07 | V | 2 |
| 21003 | 2525.3 | 21174 | 2542.4 | -24.59 | 46.57 | 21.98 | 157.76 | V | 2 |
| 21179 | 2542.9 | 21350 | 2560.0 | -25.77 | 47.06 | 21.29 | 134.71 | V | 2 |

CHANNEL BANDWIDTH: 15MHz+20MHz 16QAM

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|-----------|--------------------|-----------|
| 20828 | 2507.8 | 20999 | 2524.9 | -26.74 | 45.65 | 18.91 | 77.79 | H | 2 |
| 21003 | 2525.3 | 21174 | 2542.4 | -26.99 | 46.04 | 19.05 | 80.26 | H | 2 |
| 21179 | 2542.9 | 21350 | 2560.0 | -27.86 | 46.07 | 18.21 | 66.15 | H | 2 |
| 20828 | 2507.8 | 20999 | 2524.9 | -24.94 | 47.18 | 22.24 | 167.34 | V | 2 |
| 21003 | 2525.3 | 21174 | 2542.4 | -25.69 | 46.57 | 20.88 | 122.46 | V | 2 |
| 21179 | 2542.9 | 21350 | 2560.0 | -26.93 | 47.06 | 20.13 | 103.13 | V | 2 |

CHANNEL BANDWIDTH: 15MHz+20MHz 64QAM

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|-----------|--------------------|-----------|
| 20828 | 2507.8 | 20999 | 2524.9 | -27.35 | 45.65 | 18.30 | 67.59 | H | 2 |
| 21003 | 2525.3 | 21174 | 2542.4 | -27.59 | 46.04 | 18.45 | 69.90 | H | 2 |
| 21179 | 2542.9 | 21350 | 2560.0 | -28.52 | 46.07 | 17.55 | 56.82 | H | 2 |
| 20828 | 2507.8 | 20999 | 2524.9 | -25.46 | 47.18 | 21.72 | 148.46 | V | 2 |
| 21003 | 2525.3 | 21174 | 2542.4 | -26.27 | 46.57 | 20.30 | 107.15 | V | 2 |
| 21179 | 2542.9 | 21350 | 2560.0 | -27.59 | 47.06 | 19.47 | 88.59 | V | 2 |



Test Report No.: RF190712W002-6

CHANNEL BANDWIDTH: 20MHz+10MHz QPSK

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|---------------|--------------------|-----------|
| 20850 | 2510.0 | 20994 | 2524.9 | -25.53 | 45.65 | 20.12 | 102.75 | H | 2 |
| 21051 | 2530.1 | 21195 | 2544.5 | -25.70 | 46.04 | 20.34 | 108.02 | H | 2 |
| 21251 | 2550.1 | 21395 | 2564.5 | -26.58 | 45.87 | 19.29 | 84.84 | H | 2 |
| 20850 | 2510.0 | 20994 | 2524.9 | -23.73 | 47.03 | 23.30 | 213.70 | V | 2 |
| 21051 | 2530.1 | 21195 | 2544.5 | -24.40 | 46.57 | 22.17 | 164.82 | V | 2 |
| 21251 | 2550.1 | 21395 | 2564.5 | -25.65 | 46.98 | 21.33 | 135.83 | V | 2 |

CHANNEL BANDWIDTH: 20MHz+10MHz 16QAM

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|-----------|--------------------|-----------|
| 20850 | 2510.0 | 20994 | 2524.9 | -26.87 | 45.65 | 18.78 | 75.47 | H | 2 |
| 21051 | 2530.1 | 21195 | 2544.5 | -27.04 | 46.04 | 19.00 | 79.34 | H | 2 |
| 21251 | 2550.1 | 21395 | 2564.5 | -27.92 | 45.87 | 17.95 | 62.32 | H | 2 |
| 20850 | 2510.0 | 20994 | 2524.9 | -25.07 | 47.03 | 21.96 | 156.96 | V | 2 |
| 21051 | 2530.1 | 21195 | 2544.5 | -25.74 | 46.57 | 20.83 | 121.06 | V | 2 |
| 21251 | 2550.1 | 21395 | 2564.5 | -26.99 | 46.98 | 19.99 | 99.77 | V | 2 |

CHANNEL BANDWIDTH: 20MHz+10MHz 64QAM

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|-----------|--------------------|-----------|
| 20850 | 2510.0 | 20994 | 2524.9 | -27.35 | 45.65 | 18.30 | 67.58 | H | 2 |
| 21051 | 2530.1 | 21195 | 2544.5 | -27.53 | 46.04 | 18.51 | 70.88 | H | 2 |
| 21251 | 2550.1 | 21395 | 2564.5 | -28.53 | 45.87 | 17.34 | 54.15 | H | 2 |
| 20850 | 2510.0 | 20994 | 2524.9 | -25.40 | 47.03 | 21.63 | 145.48 | V | 2 |
| 21051 | 2530.1 | 21195 | 2544.5 | -26.09 | 46.57 | 20.48 | 111.69 | V | 2 |
| 21251 | 2550.1 | 21395 | 2564.5 | -27.46 | 46.98 | 19.52 | 89.54 | V | 2 |

CHANNEL BANDWIDTH: 20MHz+15MHz QPSK

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|---------------|--------------------|-----------|
| 20850 | 2510.0 | 21021 | 2527.1 | -25.60 | 45.63 | 20.03 | 100.76 | H | 2 |
| 21051 | 2530.1 | 21197 | 2544.7 | -25.96 | 46.04 | 20.08 | 101.74 | H | 2 |
| 21251 | 2550.1 | 21372 | 2562.2 | -26.77 | 45.94 | 19.17 | 82.57 | H | 2 |
| 20850 | 2510.0 | 21021 | 2527.1 | -23.80 | 47.39 | 23.59 | 228.51 | V | 2 |
| 21051 | 2530.1 | 21197 | 2544.7 | -24.66 | 46.57 | 21.91 | 155.24 | V | 2 |
| 21251 | 2550.1 | 21372 | 2562.2 | -25.84 | 47.00 | 21.16 | 130.59 | V | 2 |

CHANNEL BANDWIDTH: 20MHz+15MHz 16QAM

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|-----------|--------------------|-----------|
| 20850 | 2510.0 | 21021 | 2527.1 | -26.46 | 45.63 | 19.17 | 82.66 | H | 2 |
| 21051 | 2530.1 | 21197 | 2544.7 | -26.83 | 46.04 | 19.21 | 83.27 | H | 2 |
| 21251 | 2550.1 | 21372 | 2562.2 | -27.62 | 45.94 | 18.32 | 67.89 | H | 2 |
| 20850 | 2510.0 | 21021 | 2527.1 | -24.66 | 47.39 | 22.73 | 187.46 | V | 2 |
| 21051 | 2530.1 | 21197 | 2544.7 | -25.53 | 46.57 | 21.04 | 127.06 | V | 2 |
| 21251 | 2550.1 | 21372 | 2562.2 | -26.69 | 47.00 | 20.31 | 107.37 | V | 2 |

CHANNEL BANDWIDTH: 20MHz+15MHz 64QAM

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|-----------|--------------------|-----------|
| 20850 | 2510.0 | 21021 | 2527.1 | -27.33 | 45.63 | 18.30 | 67.66 | H | 2 |
| 21051 | 2530.1 | 21197 | 2544.7 | -27.63 | 46.04 | 18.41 | 69.26 | H | 2 |
| 21251 | 2550.1 | 21372 | 2562.2 | -28.56 | 45.94 | 17.38 | 54.68 | H | 2 |
| 20850 | 2510.0 | 21021 | 2527.1 | -25.44 | 47.39 | 21.95 | 156.64 | V | 2 |
| 21051 | 2530.1 | 21197 | 2544.7 | -26.26 | 46.57 | 20.31 | 107.40 | V | 2 |
| 21251 | 2550.1 | 21372 | 2562.2 | -27.59 | 47.00 | 19.41 | 87.28 | V | 2 |



Test Report No.: RF190712W002-6

CHANNEL BANDWIDTH: 20MHz+20MHz QPSK

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|---------------|--------------------|-----------|
| 20850 | 2510.0 | 21048 | 2529.8 | -26.18 | 45.80 | 19.62 | 91.60 | H | 2 |
| 21001 | 2525.1 | 21199 | 2544.9 | -26.41 | 46.04 | 19.63 | 91.73 | H | 2 |
| 21152 | 2540.2 | 21350 | 2560.0 | -27.35 | 45.83 | 18.48 | 70.52 | H | 2 |
| 20850 | 2510.0 | 21048 | 2529.8 | -24.38 | 47.21 | 22.83 | 191.87 | V | 2 |
| 21001 | 2525.1 | 21199 | 2544.9 | -25.11 | 46.57 | 21.46 | 139.83 | V | 2 |
| 21152 | 2540.2 | 21350 | 2560.0 | -26.42 | 47.07 | 20.65 | 116.12 | V | 2 |

CHANNEL BANDWIDTH: 20MHz+20MHz 16QAM

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|-----------|--------------------|-----------|
| 20850 | 2510.0 | 21048 | 2529.8 | -27.11 | 45.80 | 18.69 | 73.94 | H | 2 |
| 21001 | 2525.1 | 21199 | 2544.9 | -27.48 | 46.04 | 18.56 | 71.70 | H | 2 |
| 21152 | 2540.2 | 21350 | 2560.0 | -28.18 | 45.83 | 17.65 | 58.25 | H | 2 |
| 20850 | 2510.0 | 21048 | 2529.8 | -25.31 | 47.21 | 21.90 | 154.88 | V | 2 |
| 21001 | 2525.1 | 21199 | 2544.9 | -26.18 | 46.57 | 20.39 | 109.29 | V | 2 |
| 21152 | 2540.2 | 21350 | 2560.0 | -27.25 | 47.07 | 19.82 | 95.92 | V | 2 |

CHANNEL BANDWIDTH: 20MHz+20MHz 64QAM

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|-----------|--------------------|-----------|
| 20850 | 2510.0 | 21048 | 2529.8 | -27.23 | 45.80 | 18.57 | 71.93 | H | 2 |
| 21001 | 2525.1 | 21199 | 2544.9 | -27.44 | 46.04 | 18.60 | 72.36 | H | 2 |
| 21152 | 2540.2 | 21350 | 2560.0 | -28.46 | 45.83 | 17.37 | 54.61 | H | 2 |
| 20850 | 2510.0 | 21048 | 2529.8 | -25.47 | 47.21 | 21.74 | 149.28 | V | 2 |
| 21001 | 2525.1 | 21199 | 2544.9 | -26.26 | 46.57 | 20.31 | 107.30 | V | 2 |
| 21152 | 2540.2 | 21350 | 2560.0 | -27.57 | 47.07 | 19.50 | 89.10 | V | 2 |



BUREAU
VERITAS

Test Report No.: RF190712W002-6

LTE BAND CA_38C

CHANNEL BANDWIDTH: 15MHz+15MHz QPSK

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|---------------|--------------------|-----------|
| 37825 | 2577.5 | 37975.0 | 2592.5 | -25.20 | 46.01 | 20.81 | 120.61 | H | 2 |
| 37925 | 2587.5 | 38075.0 | 2602.5 | -25.23 | 46.04 | 20.82 | 120.64 | H | 2 |
| 38025 | 2597.5 | 38175.0 | 2612.5 | -25.39 | 46.14 | 20.75 | 118.93 | H | 2 |
| 37825 | 2577.5 | 37975.0 | 2592.5 | -24.50 | 47.03 | 22.53 | 179.02 | V | 2 |
| 37925 | 2587.5 | 38075.0 | 2602.5 | -24.24 | 47.10 | 22.86 | 193.02 | V | 2 |
| 38025 | 2597.5 | 38175.0 | 2612.5 | -23.80 | 47.17 | 23.37 | 217.37 | V | 2 |

CHANNEL BANDWIDTH: 15MHz+15MHz 16QAM

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|-----------|--------------------|-----------|
| 37825 | 2577.5 | 37975.0 | 2592.5 | -26.06 | 46.01 | 19.95 | 98.95 | H | 2 |
| 37925 | 2587.5 | 38075.0 | 2602.5 | -26.10 | 46.04 | 19.95 | 98.74 | H | 2 |
| 38025 | 2597.5 | 38175.0 | 2612.5 | -26.24 | 46.14 | 19.90 | 97.79 | H | 2 |
| 37825 | 2577.5 | 37975.0 | 2592.5 | -25.36 | 47.03 | 21.67 | 146.86 | V | 2 |
| 37925 | 2587.5 | 38075.0 | 2602.5 | -25.11 | 47.10 | 21.99 | 157.98 | V | 2 |
| 38025 | 2597.5 | 38175.0 | 2612.5 | -24.65 | 47.17 | 22.52 | 178.73 | V | 2 |

CHANNEL BANDWIDTH: 15MHz+15MHz 64QAM

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|-----------|--------------------|-----------|
| 37825 | 2577.5 | 37975.0 | 2592.5 | -27.14 | 46.01 | 18.87 | 77.16 | H | 2 |
| 37925 | 2587.5 | 38075.0 | 2602.5 | -27.01 | 46.04 | 19.04 | 80.08 | H | 2 |
| 38025 | 2597.5 | 38175.0 | 2612.5 | -27.28 | 46.14 | 18.86 | 76.97 | H | 2 |
| 37825 | 2577.5 | 37975.0 | 2592.5 | -26.39 | 47.03 | 20.64 | 115.85 | V | 2 |
| 37925 | 2587.5 | 38075.0 | 2602.5 | -26.00 | 47.10 | 21.10 | 128.71 | V | 2 |
| 38025 | 2597.5 | 38175.0 | 2612.5 | -25.62 | 47.17 | 21.55 | 142.96 | V | 2 |

CHANNEL BANDWIDTH: 20MHz+20MHz QPSK

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|---------------|--------------------|-----------|
| 37850 | 2580.0 | 38048.0 | 2599.8 | -25.78 | 46.05 | 20.27 | 106.51 | H | 2 |
| 37901 | 2585.1 | 38099.0 | 2604.9 | -25.68 | 46.04 | 20.37 | 108.77 | H | 2 |
| 37952 | 2590.2 | 38150.0 | 2610.0 | -25.97 | 46.11 | 20.14 | 103.35 | H | 2 |
| 37825 | 2577.5 | 37975.0 | 2592.5 | -25.08 | 47.07 | 21.99 | 158.09 | V | 2 |
| 37925 | 2587.5 | 38075.0 | 2602.5 | -24.69 | 47.10 | 22.41 | 174.02 | V | 2 |
| 38025 | 2597.5 | 38175.0 | 2612.5 | -24.38 | 47.13 | 22.75 | 188.45 | V | 2 |

CHANNEL BANDWIDTH: 20MHz+20MHz 16QAM

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|-----------|--------------------|-----------|
| 37850 | 2580.0 | 38048.0 | 2599.8 | -26.71 | 46.05 | 19.34 | 85.98 | H | 2 |
| 37901 | 2585.1 | 38099.0 | 2604.9 | -26.75 | 46.04 | 19.30 | 85.02 | H | 2 |
| 37952 | 2590.2 | 38150.0 | 2610.0 | -26.80 | 46.11 | 19.31 | 85.37 | H | 2 |
| 37825 | 2577.5 | 37975.0 | 2592.5 | -26.01 | 47.07 | 21.06 | 127.61 | V | 2 |
| 37925 | 2587.5 | 38075.0 | 2602.5 | -25.76 | 47.10 | 21.34 | 136.02 | V | 2 |
| 38025 | 2597.5 | 38175.0 | 2612.5 | -25.21 | 47.13 | 21.92 | 155.67 | V | 2 |

CHANNEL BANDWIDTH: 20MHz+20MHz 64QAM

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|-----------|--------------------|-----------|
| 37850 | 2580.0 | 38048.0 | 2599.8 | -27.14 | 46.05 | 18.91 | 77.88 | H | 2 |
| 37901 | 2585.1 | 38099.0 | 2604.9 | -27.00 | 46.04 | 19.05 | 80.26 | H | 2 |
| 37952 | 2590.2 | 38150.0 | 2610.0 | -27.26 | 46.11 | 18.85 | 76.79 | H | 2 |
| 37825 | 2577.5 | 37975.0 | 2592.5 | -26.45 | 47.07 | 20.62 | 115.32 | V | 2 |
| 37925 | 2587.5 | 38075.0 | 2602.5 | -26.07 | 47.10 | 21.03 | 126.65 | V | 2 |
| 38025 | 2597.5 | 38175.0 | 2612.5 | -25.70 | 47.13 | 21.43 | 139.06 | V | 2 |

REMARKS: 1. EIRP Output Power (dBm) = SPA LVL (dBm) + Correction Factor (dB).

2. Correction factor (dB) = Free Space Loss + Antenna Factor + Cable Loss

WWAN- ANT- 1

EIRP

LTE BAND 7

CHANNEL BANDWIDTH: 5MHz QPSK

| Channel | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) | Limit (W) |
|---------|-----------------|---------------|-----------------------|-----------|---------------|--------------------|-----------|
| 20775 | 2502.5 | -27.46 | 45.65 | 18.19 | 65.89 | H | 2 |
| 21100 | 2535.0 | -28.06 | 46.04 | 17.98 | 62.73 | H | 2 |
| 21425 | 2567.5 | -27.16 | 45.87 | 18.71 | 74.23 | H | 2 |
| 20775 | 2502.5 | -21.72 | 47.03 | 25.31 | 339.47 | V | 2 |
| 21100 | 2535.0 | -23.39 | 46.57 | 23.18 | 207.97 | V | 2 |
| 21425 | 2567.5 | -23.05 | 46.98 | 23.93 | 247.17 | V | 2 |

CHANNEL BANDWIDTH: 5MHz 16QAM

| Channel | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) | Limit (W) |
|---------|-----------------|---------------|-----------------------|-----------|----------|--------------------|-----------|
| 20775 | 2502.5 | -28.29 | 45.65 | 17.36 | 54.43 | H | 2 |
| 21100 | 2535.0 | -29.08 | 46.04 | 16.96 | 49.60 | H | 2 |
| 21425 | 2567.5 | -28.26 | 45.87 | 17.61 | 57.62 | H | 2 |
| 20775 | 2502.5 | -25.55 | 47.03 | 21.48 | 140.54 | V | 2 |
| 21100 | 2535.0 | -26.41 | 46.57 | 20.16 | 103.75 | V | 2 |
| 21425 | 2567.5 | -26.15 | 46.98 | 20.83 | 121.06 | V | 2 |

CHANNEL BANDWIDTH: 5MHz 64QAM

| Channel | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) | Limit (W) |
|---------|-----------------|---------------|-----------------------|-----------|----------|--------------------|-----------|
| 20775 | 2502.5 | -30.29 | 45.65 | 15.36 | 34.34 | H | 2 |
| 21100 | 2535.0 | -31.06 | 46.04 | 14.98 | 31.44 | H | 2 |
| 21425 | 2567.5 | -30.26 | 45.87 | 15.61 | 36.36 | H | 2 |
| 20775 | 2502.5 | -27.61 | 47.03 | 19.42 | 87.46 | V | 2 |
| 21100 | 2535.0 | -28.45 | 46.57 | 18.12 | 64.86 | V | 2 |
| 21425 | 2567.5 | -28.17 | 46.98 | 18.81 | 76.03 | V | 2 |

CHANNEL BANDWIDTH: 10MHz QPSK

| Channel | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) | Limit (W) |
|---------|-----------------|---------------|-----------------------|-----------|---------------|--------------------|-----------|
| 20800 | 2505.0 | -27.27 | 45.65 | 18.38 | 68.85 | H | 2 |
| 21100 | 2535.0 | -28.00 | 46.04 | 18.04 | 63.61 | H | 2 |
| 21400 | 2565.0 | -27.03 | 46.07 | 19.04 | 80.08 | H | 2 |
| 20800 | 2505.0 | -21.53 | 47.18 | 25.65 | 366.94 | V | 2 |
| 21100 | 2535.0 | -23.33 | 46.57 | 23.24 | 210.86 | V | 2 |
| 21400 | 2565.0 | -22.92 | 47.06 | 24.14 | 259.66 | V | 2 |

CHANNEL BANDWIDTH: 10MHz 16QAM

| Channel | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) | Limit (W) |
|---------|-----------------|---------------|-----------------------|-----------|----------|--------------------|-----------|
| 20800 | 2505.0 | -28.42 | 45.65 | 17.23 | 52.83 | H | 2 |
| 21100 | 2535.0 | -29.10 | 46.04 | 16.94 | 49.37 | H | 2 |
| 21400 | 2565.0 | -28.19 | 46.07 | 17.88 | 61.31 | H | 2 |
| 20800 | 2505.0 | -25.68 | 47.18 | 21.50 | 141.12 | V | 2 |
| 21100 | 2535.0 | -26.43 | 46.57 | 20.14 | 103.28 | V | 2 |
| 21400 | 2565.0 | -26.08 | 47.06 | 20.98 | 125.43 | V | 2 |

CHANNEL BANDWIDTH: 10MHz 64QAM

| Channel | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) | Limit (W) |
|---------|-----------------|---------------|-----------------------|-----------|----------|--------------------|-----------|
| 20800 | 2505.0 | -30.52 | 45.65 | 15.13 | 32.58 | H | 2 |
| 21100 | 2535.0 | -31.06 | 46.04 | 14.98 | 31.44 | H | 2 |
| 21400 | 2565.0 | -30.28 | 46.07 | 15.79 | 37.89 | H | 2 |
| 20800 | 2505.0 | -27.81 | 47.18 | 19.37 | 86.42 | V | 2 |
| 21100 | 2535.0 | -28.39 | 46.57 | 18.18 | 65.77 | V | 2 |
| 21400 | 2565.0 | -28.11 | 47.06 | 18.95 | 78.60 | V | 2 |

CHANNEL BANDWIDTH: 15MHz QPSK

| Channel | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) | Limit (W) |
|---------|-----------------|---------------|-----------------------|-----------|---------------|--------------------|-----------|
| 20825 | 2507.5 | -27.28 | 45.63 | 18.35 | 68.44 | H | 2 |
| 21100 | 2535.0 | -28.07 | 46.04 | 17.97 | 62.59 | H | 2 |
| 21375 | 2562.5 | -27.10 | 45.94 | 18.84 | 76.52 | H | 2 |
| 20825 | 2507.5 | -21.54 | 47.39 | 25.85 | 384.50 | V | 2 |
| 21100 | 2535.0 | -23.40 | 46.57 | 23.17 | 207.49 | V | 2 |
| 21375 | 2562.5 | -22.99 | 47.00 | 24.01 | 251.71 | V | 2 |

CHANNEL BANDWIDTH: 15MHz 16QAM

| Channel | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) | Limit (W) |
|---------|-----------------|---------------|-----------------------|-----------|----------|--------------------|-----------|
| 20825 | 2507.5 | -28.14 | 45.63 | 17.49 | 56.14 | H | 2 |
| 21100 | 2535.0 | -28.94 | 46.04 | 17.10 | 51.23 | H | 2 |
| 21375 | 2562.5 | -27.95 | 45.94 | 17.99 | 62.92 | H | 2 |
| 20825 | 2507.5 | -25.40 | 47.39 | 21.99 | 158.09 | V | 2 |
| 21100 | 2535.0 | -26.27 | 46.57 | 20.30 | 107.15 | V | 2 |
| 21375 | 2562.5 | -25.84 | 47.00 | 21.16 | 130.59 | V | 2 |

CHANNEL BANDWIDTH: 15MHz 64QAM

| Channel | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) | Limit (W) |
|---------|-----------------|---------------|-----------------------|-----------|----------|--------------------|-----------|
| 20825 | 2507.5 | -30.19 | 45.63 | 15.44 | 35.02 | H | 2 |
| 21100 | 2535.0 | -28.99 | 46.04 | 17.05 | 50.64 | H | 2 |
| 21375 | 2562.5 | -30.04 | 45.94 | 15.90 | 38.89 | H | 2 |
| 20825 | 2507.5 | -27.43 | 47.39 | 19.96 | 99.06 | V | 2 |
| 21100 | 2535.0 | -28.33 | 46.57 | 18.24 | 66.68 | V | 2 |
| 21375 | 2562.5 | -27.92 | 47.00 | 19.08 | 80.89 | V | 2 |

CHANNEL BANDWIDTH: 20MHz QPSK

| Channel | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) | Limit (W) |
|---------|-----------------|---------------|-----------------------|-----------|---------------|--------------------|-----------|
| 20850 | 2510.0 | -27.86 | 45.80 | 17.94 | 62.22 | H | 2 |
| 21100 | 2535.0 | -28.52 | 46.04 | 17.52 | 56.43 | H | 2 |
| 21350 | 2560.0 | -27.68 | 45.83 | 18.15 | 65.36 | H | 2 |
| 20850 | 2510.0 | -25.12 | 47.21 | 22.09 | 161.81 | V | 2 |
| 21100 | 2535.0 | -25.85 | 46.57 | 20.72 | 117.92 | V | 2 |
| 21350 | 2560.0 | -25.57 | 47.07 | 21.50 | 141.22 | V | 2 |

CHANNEL BANDWIDTH: 20MHz 16QAM

| Channel | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) | Limit (W) |
|---------|-----------------|---------------|-----------------------|-----------|----------|--------------------|-----------|
| 20850 | 2510.0 | -28.79 | 45.80 | 17.01 | 50.22 | H | 2 |
| 21100 | 2535.0 | -29.59 | 46.04 | 16.45 | 44.11 | H | 2 |
| 21350 | 2560.0 | -28.51 | 45.83 | 17.32 | 53.99 | H | 2 |
| 20850 | 2510.0 | -26.05 | 47.21 | 21.16 | 130.62 | V | 2 |
| 21100 | 2535.0 | -26.92 | 46.57 | 19.65 | 92.17 | V | 2 |
| 21350 | 2560.0 | -26.40 | 47.07 | 20.67 | 116.65 | V | 2 |

CHANNEL BANDWIDTH: 20MHz 64QAM

| Channel | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) | Limit (W) |
|---------|-----------------|---------------|-----------------------|-----------|----------|--------------------|-----------|
| 20850 | 2510.0 | -30.87 | 45.80 | 14.93 | 31.11 | H | 2 |
| 21100 | 2535.0 | -31.69 | 46.04 | 14.35 | 27.20 | H | 2 |
| 21350 | 2560.0 | -30.86 | 45.83 | 14.97 | 31.43 | H | 2 |
| 20850 | 2510.0 | -28.12 | 47.21 | 19.09 | 81.10 | V | 2 |
| 21100 | 2535.0 | -29.00 | 46.57 | 17.57 | 57.10 | V | 2 |
| 21350 | 2560.0 | -28.51 | 47.07 | 18.56 | 71.76 | V | 2 |

REMARKS: 1. EIRP Output Power (dBm) = SPA LVL (dBm) + Correction Factor (dB).
2. Correction factor (dB) = Free Space Loss + Antenna Factor + Cable Loss



BUREAU
VERITAS

Test Report No.: RF190712W002-6

LTE BAND 38

CHANNEL BANDWIDTH: 5MHz QPSK

| Channel | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) | Limit (W) |
|---------|-----------------|---------------|-----------------------|-----------|---------------|--------------------|-----------|
| 37775 | 2572.5 | -27.01 | 45.91 | 18.90 | 77.62 | H | 2 |
| 38000 | 2595.0 | -26.43 | 46.04 | 19.61 | 91.41 | H | 2 |
| 38225 | 2617.5 | -26.23 | 46.23 | 20.00 | 100.00 | H | 2 |
| 37775 | 2572.5 | -22.84 | 46.92 | 24.08 | 255.86 | V | 2 |
| 38000 | 2595.0 | -23.16 | 47.10 | 23.94 | 247.74 | V | 2 |
| 38225 | 2617.5 | -22.26 | 47.26 | 25.00 | 316.23 | V | 2 |

CHANNEL BANDWIDTH: 5MHz 16QAM

| Channel | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) | Limit (W) |
|---------|-----------------|---------------|-----------------------|-----------|----------|--------------------|-----------|
| 37775 | 2572.5 | -27.84 | 45.91 | 18.07 | 64.12 | H | 2 |
| 38000 | 2595.0 | -27.45 | 46.04 | 18.59 | 72.28 | H | 2 |
| 38225 | 2617.5 | -27.33 | 46.23 | 18.90 | 77.62 | H | 2 |
| 37775 | 2572.5 | -25.67 | 46.92 | 21.25 | 133.35 | V | 2 |
| 38000 | 2595.0 | -26.18 | 47.10 | 20.92 | 123.59 | V | 2 |
| 38225 | 2617.5 | -26.36 | 47.26 | 20.90 | 123.03 | V | 2 |

CHANNEL BANDWIDTH: 5MHz 64QAM

| Channel | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) | Limit (W) |
|---------|-----------------|---------------|-----------------------|-----------|----------|--------------------|-----------|
| 37775 | 2572.5 | -29.93 | 45.91 | 15.98 | 39.63 | H | 2 |
| 38000 | 2595.0 | -29.49 | 46.04 | 16.55 | 45.19 | H | 2 |
| 38225 | 2617.5 | -29.43 | 46.23 | 16.80 | 47.86 | H | 2 |
| 37775 | 2572.5 | -27.76 | 46.92 | 19.16 | 82.41 | V | 2 |
| 38000 | 2595.0 | -28.21 | 47.10 | 18.89 | 77.45 | V | 2 |
| 38225 | 2617.5 | -28.41 | 47.26 | 18.85 | 76.74 | V | 2 |

CHANNEL BANDWIDTH: 10MHz QPSK

| Channel | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) | Limit (W) |
|---------|-----------------|---------------|-----------------------|-----------|---------------|--------------------|-----------|
| 37800 | 2575.0 | -26.82 | 45.96 | 19.14 | 82.04 | H | 2 |
| 38000 | 2595.0 | -26.37 | 46.04 | 19.67 | 92.68 | H | 2 |
| 38200 | 2615.0 | -26.10 | 46.18 | 20.08 | 101.86 | H | 2 |
| 37800 | 2575.0 | -22.65 | 46.99 | 24.34 | 271.64 | V | 2 |
| 38000 | 2595.0 | -23.10 | 47.10 | 24.00 | 251.19 | V | 2 |
| 38200 | 2615.0 | -22.13 | 47.21 | 25.08 | 322.11 | V | 2 |

CHANNEL BANDWIDTH: 10MHz 16QAM

| Channel | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) | Limit (W) |
|---------|-----------------|---------------|-----------------------|-----------|----------|--------------------|-----------|
| 37800 | 2575.0 | -27.97 | 45.96 | 17.99 | 62.95 | H | 2 |
| 38000 | 2595.0 | -27.47 | 46.04 | 18.57 | 71.94 | H | 2 |
| 38200 | 2615.0 | -27.26 | 46.18 | 18.92 | 77.98 | H | 2 |
| 37800 | 2575.0 | -25.80 | 46.99 | 21.19 | 131.52 | V | 2 |
| 38000 | 2595.0 | -26.20 | 47.10 | 20.90 | 123.03 | V | 2 |
| 38200 | 2615.0 | -26.29 | 47.21 | 20.92 | 123.59 | V | 2 |

CHANNEL BANDWIDTH: 10MHz 64QAM

| Channel | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) | Limit (W) |
|---------|-----------------|---------------|-----------------------|-----------|----------|--------------------|-----------|
| 37800 | 2575.0 | -30.07 | 45.96 | 15.89 | 38.82 | H | 2 |
| 38000 | 2595.0 | -29.47 | 46.04 | 16.57 | 45.39 | H | 2 |
| 38200 | 2615.0 | -29.28 | 46.18 | 16.90 | 48.98 | H | 2 |
| 37800 | 2575.0 | -27.82 | 46.99 | 19.17 | 82.60 | V | 2 |
| 38000 | 2595.0 | -28.22 | 47.10 | 18.88 | 77.27 | V | 2 |
| 38200 | 2615.0 | -28.35 | 47.21 | 18.86 | 76.91 | V | 2 |

CHANNEL BANDWIDTH: 15MHz QPSK

| Channel | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) | Limit (W) |
|---------|-----------------|---------------|-----------------------|-----------|---------------|--------------------|-----------|
| 37825 | 2577.5 | -26.83 | 46.01 | 19.18 | 82.79 | H | 2 |
| 38000 | 2595.0 | -26.44 | 46.04 | 19.60 | 91.20 | H | 2 |
| 38175 | 2612.5 | -26.17 | 46.14 | 19.97 | 99.31 | H | 2 |
| 37825 | 2577.5 | -22.66 | 47.03 | 24.37 | 273.53 | V | 2 |
| 38000 | 2595.0 | -23.17 | 47.10 | 23.93 | 247.17 | V | 2 |
| 38175 | 2612.5 | -22.20 | 47.17 | 24.97 | 314.05 | V | 2 |

CHANNEL BANDWIDTH: 15MHz 16QAM

| Channel | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) | Limit (W) |
|---------|-----------------|---------------|-----------------------|-----------|----------|--------------------|-----------|
| 37825 | 2577.5 | -27.69 | 46.01 | 18.32 | 67.92 | H | 2 |
| 38000 | 2595.0 | -27.31 | 46.04 | 18.73 | 74.64 | H | 2 |
| 38175 | 2612.5 | -27.02 | 46.14 | 19.12 | 81.66 | H | 2 |
| 37825 | 2577.5 | -25.52 | 47.03 | 21.51 | 141.58 | V | 2 |
| 38000 | 2595.0 | -26.04 | 47.10 | 21.06 | 127.64 | V | 2 |
| 38175 | 2612.5 | -26.05 | 47.17 | 21.12 | 129.42 | V | 2 |

CHANNEL BANDWIDTH: 15MHz 64QAM

| Channel | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) | Limit (W) |
|---------|-----------------|---------------|-----------------------|-----------|----------|--------------------|-----------|
| 37825 | 2577.5 | -27.59 | 46.01 | 18.42 | 69.50 | H | 2 |
| 38000 | 2595.0 | -29.41 | 46.04 | 16.63 | 46.03 | H | 2 |
| 38175 | 2612.5 | -29.05 | 46.14 | 17.09 | 51.17 | H | 2 |
| 37825 | 2577.5 | -27.53 | 47.03 | 19.50 | 89.13 | V | 2 |
| 38000 | 2595.0 | -28.54 | 47.10 | 18.56 | 71.78 | V | 2 |
| 38175 | 2612.5 | -29.04 | 47.17 | 18.13 | 65.01 | V | 2 |

CHANNEL BANDWIDTH: 20MHz QPSK

| Channel | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) | Limit (W) |
|---------|-----------------|---------------|-----------------------|-----------|---------------|--------------------|-----------|
| 37850 | 2580.0 | -27.41 | 46.05 | 18.64 | 73.11 | H | 2 |
| 38000 | 2595.0 | -26.89 | 46.04 | 19.15 | 82.22 | H | 2 |
| 38150 | 2610.0 | -26.75 | 46.11 | 19.36 | 86.30 | H | 2 |
| 37850 | 2580.0 | -25.24 | 47.07 | 21.83 | 152.41 | V | 2 |
| 38000 | 2595.0 | -25.62 | 47.10 | 21.48 | 140.60 | V | 2 |
| 38150 | 2610.0 | -25.78 | 47.13 | 21.35 | 136.46 | V | 2 |

CHANNEL BANDWIDTH: 20MHz 16QAM

| Channel | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) | Limit (W) |
|---------|-----------------|---------------|-----------------------|-----------|----------|--------------------|-----------|
| 37850 | 2580.0 | -28.34 | 46.05 | 17.71 | 59.02 | H | 2 |
| 38000 | 2595.0 | -27.96 | 46.04 | 18.08 | 64.27 | H | 2 |
| 38150 | 2610.0 | -27.58 | 46.11 | 18.53 | 71.29 | H | 2 |
| 37850 | 2580.0 | -26.17 | 47.07 | 20.90 | 123.03 | V | 2 |
| 38000 | 2595.0 | -26.69 | 47.10 | 20.41 | 109.90 | V | 2 |
| 38150 | 2610.0 | -26.61 | 47.13 | 20.52 | 112.72 | V | 2 |

CHANNEL BANDWIDTH: 20MHz 64QAM

| Channel | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP(dBm) | EIRP(mW) | Polarization (H/V) | Limit (W) |
|---------|-----------------|---------------|-----------------------|-----------|----------|--------------------|-----------|
| 37850 | 2580.0 | -30.41 | 46.05 | 15.64 | 36.64 | H | 2 |
| 38000 | 2595.0 | -29.97 | 46.04 | 16.07 | 40.46 | H | 2 |
| 38150 | 2610.0 | -29.62 | 46.11 | 16.49 | 44.57 | H | 2 |
| 37850 | 2580.0 | -28.22 | 47.07 | 18.85 | 76.74 | V | 2 |
| 38000 | 2595.0 | -28.85 | 47.10 | 18.25 | 66.83 | V | 2 |
| 38150 | 2610.0 | -28.74 | 47.13 | 18.39 | 69.02 | V | 2 |



BUREAU
VERITAS

Test Report No.: RF190712W002-6

LTE BAND CA_7C

CHANNEL BANDWIDTH: 10MHz+20MHz QPSK

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|---------------|--------------------|-----------|
| 20805 | 2505.5 | 20949 | 2519.9 | -25.33 | 45.65 | 20.32 | 107.60 | H | 2 |
| 21006 | 2525.6 | 21150 | 2540.0 | -25.51 | 46.04 | 20.53 | 112.85 | H | 2 |
| 21206 | 2545.6 | 21350 | 2560.0 | -25.35 | 45.87 | 20.52 | 112.62 | H | 2 |
| 20805 | 2505.5 | 20949 | 2519.9 | -24.61 | 47.03 | 22.42 | 174.50 | V | 2 |
| 21006 | 2525.6 | 21150 | 2540.0 | -23.09 | 46.57 | 23.48 | 222.84 | V | 2 |
| 21206 | 2545.6 | 21350 | 2560.0 | -24.39 | 46.98 | 22.59 | 181.55 | V | 2 |

CHANNEL BANDWIDTH: 10MHz+20MHz 16QAM

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|-----------|--------------------|-----------|
| 20805 | 2505.5 | 20949 | 2519.9 | -26.40 | 45.65 | 19.25 | 84.10 | H | 2 |
| 21006 | 2525.6 | 21150 | 2540.0 | -26.57 | 46.04 | 19.47 | 88.41 | H | 2 |
| 21206 | 2545.6 | 21350 | 2560.0 | -26.45 | 45.87 | 19.42 | 87.42 | H | 2 |
| 20805 | 2505.5 | 20949 | 2519.9 | -25.60 | 47.03 | 21.43 | 138.93 | V | 2 |
| 21006 | 2525.6 | 21150 | 2540.0 | -24.27 | 46.57 | 22.30 | 169.82 | V | 2 |
| 21206 | 2545.6 | 21350 | 2560.0 | -25.52 | 46.98 | 21.46 | 139.96 | V | 2 |

CHANNEL BANDWIDTH: 10MHz+20MHz 64QAM

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|-----------|--------------------|-----------|
| 20805 | 2505.5 | 20949 | 2519.9 | -26.77 | 45.65 | 18.88 | 77.23 | H | 2 |
| 21006 | 2525.6 | 21150 | 2540.0 | -26.97 | 46.04 | 19.07 | 80.63 | H | 2 |
| 21206 | 2545.6 | 21350 | 2560.0 | -26.99 | 45.87 | 18.88 | 77.20 | H | 2 |
| 20805 | 2505.5 | 20949 | 2519.9 | -25.98 | 47.03 | 21.05 | 127.29 | V | 2 |
| 21006 | 2525.6 | 21150 | 2540.0 | -24.68 | 46.57 | 21.89 | 154.53 | V | 2 |
| 21206 | 2545.6 | 21350 | 2560.0 | -26.07 | 46.98 | 20.91 | 123.31 | V | 2 |

CHANNEL BANDWIDTH: 15MHz+10MHz QPSK

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|---------------|--------------------|-----------|
| 20825 | 2507.5 | 20945 | 2519.5 | -25.26 | 45.65 | 20.39 | 109.35 | H | 2 |
| 21025 | 2527.5 | 21171 | 2542.1 | -25.48 | 46.04 | 20.56 | 113.63 | H | 2 |
| 21225 | 2547.5 | 21397 | 2564.7 | -25.31 | 45.87 | 20.56 | 113.66 | H | 2 |
| 20825 | 2507.5 | 20945 | 2519.5 | -24.45 | 47.03 | 22.58 | 181.05 | V | 2 |
| 21025 | 2527.5 | 21171 | 2542.1 | -23.11 | 46.57 | 23.46 | 221.82 | V | 2 |
| 21225 | 2547.5 | 21397 | 2564.7 | -24.31 | 46.98 | 22.67 | 184.93 | V | 2 |

CHANNEL BANDWIDTH: 15MHz+10MHz 16QAM

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|-----------|--------------------|-----------|
| 20825 | 2507.5 | 20945 | 2519.5 | -26.38 | 45.65 | 19.27 | 84.49 | H | 2 |
| 21025 | 2527.5 | 21171 | 2542.1 | -26.55 | 46.04 | 19.49 | 88.82 | H | 2 |
| 21225 | 2547.5 | 21397 | 2564.7 | -26.43 | 45.87 | 19.44 | 87.82 | H | 2 |
| 20825 | 2507.5 | 20945 | 2519.5 | -25.58 | 47.03 | 21.45 | 139.57 | V | 2 |
| 21025 | 2527.5 | 21171 | 2542.1 | -24.25 | 46.57 | 22.32 | 170.61 | V | 2 |
| 21225 | 2547.5 | 21397 | 2564.7 | -25.50 | 46.98 | 21.48 | 140.60 | V | 2 |

CHANNEL BANDWIDTH: 15MHz+10MHz 64QAM

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|-----------|--------------------|-----------|
| 20825 | 2507.5 | 20945 | 2519.5 | -26.83 | 45.65 | 18.82 | 76.17 | H | 2 |
| 21025 | 2527.5 | 21171 | 2542.1 | -27.00 | 46.04 | 19.04 | 80.08 | H | 2 |
| 21225 | 2547.5 | 21397 | 2564.7 | -27.05 | 45.87 | 18.82 | 76.14 | H | 2 |
| 20825 | 2507.5 | 20945 | 2519.5 | -26.02 | 47.03 | 21.01 | 126.12 | V | 2 |
| 21025 | 2527.5 | 21171 | 2542.1 | -24.68 | 46.57 | 21.89 | 154.53 | V | 2 |
| 21225 | 2547.5 | 21397 | 2564.7 | -26.11 | 46.98 | 20.87 | 122.18 | V | 2 |

CHANNEL BANDWIDTH: 15MHz+15MHz QPSK

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|---------------|--------------------|-----------|
| 20825 | 2507.5 | 20975 | 2522.5 | -25.28 | 45.65 | 20.37 | 108.84 | H | 2 |
| 21025 | 2527.5 | 21175 | 2542.5 | -25.45 | 46.04 | 20.59 | 114.42 | H | 2 |
| 21225 | 2547.5 | 21375 | 2562.5 | -25.33 | 45.87 | 20.54 | 113.14 | H | 2 |
| 20825 | 2507.5 | 20975 | 2522.5 | -24.48 | 47.03 | 22.55 | 179.80 | V | 2 |
| 21025 | 2527.5 | 21175 | 2542.5 | -23.15 | 46.57 | 23.42 | 219.79 | V | 2 |
| 21225 | 2547.5 | 21375 | 2562.5 | -24.40 | 46.98 | 22.58 | 181.13 | V | 2 |

CHANNEL BANDWIDTH: 15MHz+15MHz 16QAM

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|-----------|--------------------|-----------|
| 20825 | 2507.5 | 20975 | 2522.5 | -26.11 | 45.65 | 19.54 | 89.91 | H | 2 |
| 21025 | 2527.5 | 21175 | 2542.5 | -26.47 | 46.04 | 19.57 | 90.47 | H | 2 |
| 21225 | 2547.5 | 21375 | 2562.5 | -26.43 | 45.87 | 19.44 | 87.82 | H | 2 |
| 20825 | 2507.5 | 20975 | 2522.5 | -25.31 | 47.03 | 21.72 | 148.53 | V | 2 |
| 21025 | 2527.5 | 21175 | 2542.5 | -24.17 | 46.57 | 22.40 | 173.78 | V | 2 |
| 21225 | 2547.5 | 21375 | 2562.5 | -25.50 | 46.98 | 21.48 | 140.60 | V | 2 |

CHANNEL BANDWIDTH: 15MHz+15MHz 64QAM

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|-----------|--------------------|-----------|
| 20825 | 2507.5 | 20975 | 2522.5 | -26.89 | 45.65 | 18.76 | 75.13 | H | 2 |
| 21025 | 2527.5 | 21175 | 2542.5 | -27.25 | 46.04 | 18.79 | 75.60 | H | 2 |
| 21225 | 2547.5 | 21375 | 2562.5 | -27.20 | 45.87 | 18.67 | 73.55 | H | 2 |
| 20825 | 2507.5 | 20975 | 2522.5 | -26.16 | 47.03 | 20.87 | 122.12 | V | 2 |
| 21025 | 2527.5 | 21175 | 2542.5 | -24.93 | 46.57 | 21.64 | 145.88 | V | 2 |
| 21225 | 2547.5 | 21375 | 2562.5 | -26.33 | 46.98 | 20.65 | 116.14 | V | 2 |

CHANNEL BANDWIDTH: 15MHz+20MHz QPSK

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|---------------|--------------------|-----------|
| 20828 | 2507.8 | 20999 | 2524.9 | -25.09 | 45.65 | 20.56 | 113.74 | H | 2 |
| 21003 | 2525.3 | 21174 | 2542.4 | -25.39 | 46.04 | 20.65 | 116.01 | H | 2 |
| 21179 | 2542.9 | 21350 | 2560.0 | -25.20 | 46.07 | 20.87 | 122.04 | H | 2 |
| 20828 | 2507.8 | 20999 | 2524.9 | -24.29 | 47.18 | 22.89 | 194.36 | V | 2 |
| 21003 | 2525.3 | 21174 | 2542.4 | -23.09 | 46.57 | 23.48 | 222.84 | V | 2 |
| 21179 | 2542.9 | 21350 | 2560.0 | -24.27 | 47.06 | 22.79 | 190.28 | V | 2 |

CHANNEL BANDWIDTH: 15MHz+20MHz 16QAM

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|-----------|--------------------|-----------|
| 20828 | 2507.8 | 20999 | 2524.9 | -26.24 | 45.65 | 19.41 | 87.28 | H | 2 |
| 21003 | 2525.3 | 21174 | 2542.4 | -26.49 | 46.04 | 19.55 | 90.05 | H | 2 |
| 21179 | 2542.9 | 21350 | 2560.0 | -26.36 | 46.07 | 19.71 | 93.43 | H | 2 |
| 20828 | 2507.8 | 20999 | 2524.9 | -25.44 | 47.18 | 21.74 | 149.14 | V | 2 |
| 21003 | 2525.3 | 21174 | 2542.4 | -24.19 | 46.57 | 22.38 | 172.98 | V | 2 |
| 21179 | 2542.9 | 21350 | 2560.0 | -25.43 | 47.06 | 21.63 | 145.68 | V | 2 |

CHANNEL BANDWIDTH: 15MHz+20MHz 64QAM

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|-----------|--------------------|-----------|
| 20828 | 2507.8 | 20999 | 2524.9 | -26.85 | 45.65 | 18.80 | 75.84 | H | 2 |
| 21003 | 2525.3 | 21174 | 2542.4 | -27.09 | 46.04 | 18.95 | 78.43 | H | 2 |
| 21179 | 2542.9 | 21350 | 2560.0 | -27.02 | 46.07 | 19.05 | 80.26 | H | 2 |
| 20828 | 2507.8 | 20999 | 2524.9 | -25.96 | 47.18 | 21.22 | 132.31 | V | 2 |
| 21003 | 2525.3 | 21174 | 2542.4 | -24.77 | 46.57 | 21.80 | 151.36 | V | 2 |
| 21179 | 2542.9 | 21350 | 2560.0 | -26.09 | 47.06 | 20.97 | 125.14 | V | 2 |



Test Report No.: RF190712W002-6

CHANNEL BANDWIDTH: 20MHz+10MHz QPSK

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|---------------|--------------------|-----------|
| 20850 | 2510.0 | 20994 | 2524.9 | -25.22 | 45.65 | 20.43 | 110.36 | H | 2 |
| 21051 | 2530.1 | 21195 | 2544.5 | -25.43 | 46.04 | 20.61 | 114.95 | H | 2 |
| 21251 | 2550.1 | 21395 | 2564.5 | -25.30 | 45.87 | 20.57 | 113.92 | H | 2 |
| 20850 | 2510.0 | 20994 | 2524.9 | -24.44 | 47.03 | 22.59 | 181.47 | V | 2 |
| 21051 | 2530.1 | 21195 | 2544.5 | -23.14 | 46.57 | 23.43 | 220.29 | V | 2 |
| 21251 | 2550.1 | 21395 | 2564.5 | -24.40 | 46.98 | 22.58 | 181.13 | V | 2 |

CHANNEL BANDWIDTH: 20MHz+10MHz 16QAM

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|-----------|--------------------|-----------|
| 20850 | 2510.0 | 20994 | 2524.9 | -26.34 | 45.65 | 19.31 | 85.27 | H | 2 |
| 21051 | 2530.1 | 21195 | 2544.5 | -26.51 | 46.04 | 19.53 | 89.64 | H | 2 |
| 21251 | 2550.1 | 21395 | 2564.5 | -26.39 | 45.87 | 19.48 | 88.63 | H | 2 |
| 20850 | 2510.0 | 20994 | 2524.9 | -25.54 | 47.03 | 21.49 | 140.86 | V | 2 |
| 21051 | 2530.1 | 21195 | 2544.5 | -24.21 | 46.57 | 22.36 | 172.19 | V | 2 |
| 21251 | 2550.1 | 21395 | 2564.5 | -25.46 | 46.98 | 21.52 | 141.91 | V | 2 |

CHANNEL BANDWIDTH: 20MHz+10MHz 64QAM

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|-----------|--------------------|-----------|
| 20850 | 2510.0 | 20994 | 2524.9 | -26.85 | 45.65 | 18.80 | 75.82 | H | 2 |
| 21051 | 2530.1 | 21195 | 2544.5 | -27.03 | 46.04 | 19.01 | 79.52 | H | 2 |
| 21251 | 2550.1 | 21395 | 2564.5 | -27.03 | 45.87 | 18.84 | 76.49 | H | 2 |
| 20850 | 2510.0 | 20994 | 2524.9 | -25.90 | 47.03 | 21.13 | 129.66 | V | 2 |
| 21051 | 2530.1 | 21195 | 2544.5 | -24.59 | 46.57 | 21.98 | 157.76 | V | 2 |
| 21251 | 2550.1 | 21395 | 2564.5 | -25.96 | 46.98 | 21.02 | 126.47 | V | 2 |

CHANNEL BANDWIDTH: 20MHz+15MHz QPSK

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|---------------|--------------------|-----------|
| 20850 | 2510.0 | 21021 | 2527.1 | -25.10 | 45.63 | 20.53 | 113.06 | H | 2 |
| 21051 | 2530.1 | 21197 | 2544.7 | -25.46 | 46.04 | 20.58 | 114.16 | H | 2 |
| 21251 | 2550.1 | 21372 | 2562.2 | -25.27 | 45.94 | 20.67 | 116.63 | H | 2 |
| 20850 | 2510.0 | 21021 | 2527.1 | -24.30 | 47.39 | 23.09 | 203.66 | V | 2 |
| 21051 | 2530.1 | 21197 | 2544.7 | -23.16 | 46.57 | 23.41 | 219.28 | V | 2 |
| 21251 | 2550.1 | 21372 | 2562.2 | -24.34 | 47.00 | 22.66 | 184.46 | V | 2 |

CHANNEL BANDWIDTH: 20MHz+15MHz 16QAM

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|-----------|--------------------|-----------|
| 20850 | 2510.0 | 21021 | 2527.1 | -25.96 | 45.63 | 19.67 | 92.75 | H | 2 |
| 21051 | 2530.1 | 21197 | 2544.7 | -26.33 | 46.04 | 19.71 | 93.43 | H | 2 |
| 21251 | 2550.1 | 21372 | 2562.2 | -26.12 | 45.94 | 19.82 | 95.90 | H | 2 |
| 20850 | 2510.0 | 21021 | 2527.1 | -25.16 | 47.39 | 22.23 | 167.07 | V | 2 |
| 21051 | 2530.1 | 21197 | 2544.7 | -24.03 | 46.57 | 22.54 | 179.47 | V | 2 |
| 21251 | 2550.1 | 21372 | 2562.2 | -25.19 | 47.00 | 21.81 | 151.67 | V | 2 |

CHANNEL BANDWIDTH: 20MHz+15MHz 64QAM

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|-----------|--------------------|-----------|
| 20850 | 2510.0 | 21021 | 2527.1 | -26.83 | 45.63 | 18.80 | 75.91 | H | 2 |
| 21051 | 2530.1 | 21197 | 2544.7 | -27.13 | 46.04 | 18.91 | 77.71 | H | 2 |
| 21251 | 2550.1 | 21372 | 2562.2 | -27.06 | 45.94 | 18.88 | 77.23 | H | 2 |
| 20850 | 2510.0 | 21021 | 2527.1 | -25.94 | 47.39 | 21.45 | 139.60 | V | 2 |
| 21051 | 2530.1 | 21197 | 2544.7 | -24.76 | 46.57 | 21.81 | 151.71 | V | 2 |
| 21251 | 2550.1 | 21372 | 2562.2 | -26.09 | 47.00 | 20.91 | 123.28 | V | 2 |



Test Report No.: RF190712W002-6

CHANNEL BANDWIDTH: 20MHz+20MHz QPSK

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|---------------|--------------------|-----------|
| 20850 | 2510.0 | 21048 | 2529.8 | -25.68 | 45.80 | 20.12 | 102.78 | H | 2 |
| 21001 | 2525.1 | 21199 | 2544.9 | -25.91 | 46.04 | 20.13 | 102.92 | H | 2 |
| 21152 | 2540.2 | 21350 | 2560.0 | -25.85 | 45.83 | 19.98 | 99.61 | H | 2 |
| 20850 | 2510.0 | 21048 | 2529.8 | -24.88 | 47.21 | 22.33 | 171.00 | V | 2 |
| 21001 | 2525.1 | 21199 | 2544.9 | -23.61 | 46.57 | 22.96 | 197.51 | V | 2 |
| 21152 | 2540.2 | 21350 | 2560.0 | -24.92 | 47.07 | 22.15 | 164.02 | V | 2 |

CHANNEL BANDWIDTH: 20MHz+20MHz 16QAM

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|-----------|--------------------|-----------|
| 20850 | 2510.0 | 21048 | 2529.8 | -26.61 | 45.80 | 19.19 | 82.97 | H | 2 |
| 21001 | 2525.1 | 21199 | 2544.9 | -26.98 | 46.04 | 19.06 | 80.45 | H | 2 |
| 21152 | 2540.2 | 21350 | 2560.0 | -26.68 | 45.83 | 19.15 | 82.28 | H | 2 |
| 20850 | 2510.0 | 21048 | 2529.8 | -25.81 | 47.21 | 21.40 | 138.04 | V | 2 |
| 21001 | 2525.1 | 21199 | 2544.9 | -24.68 | 46.57 | 21.89 | 154.38 | V | 2 |
| 21152 | 2540.2 | 21350 | 2560.0 | -25.75 | 47.07 | 21.32 | 135.49 | V | 2 |

CHANNEL BANDWIDTH: 20MHz+20MHz 64QAM

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|-----------|--------------------|-----------|
| 20850 | 2510.0 | 21048 | 2529.8 | -26.73 | 45.80 | 19.07 | 80.70 | H | 2 |
| 21001 | 2525.1 | 21199 | 2544.9 | -26.94 | 46.04 | 19.10 | 81.19 | H | 2 |
| 21152 | 2540.2 | 21350 | 2560.0 | -26.96 | 45.83 | 18.87 | 77.14 | H | 2 |
| 20850 | 2510.0 | 21048 | 2529.8 | -25.97 | 47.21 | 21.24 | 133.05 | V | 2 |
| 21001 | 2525.1 | 21199 | 2544.9 | -24.76 | 46.57 | 21.81 | 151.57 | V | 2 |
| 21152 | 2540.2 | 21350 | 2560.0 | -26.07 | 47.07 | 21.00 | 125.86 | V | 2 |



BUREAU
VERITAS

Test Report No.: RF190712W002-6

LTE BAND CA_38C

CHANNEL BANDWIDTH: 15MHz+15MHz QPSK

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|---------------|--------------------|-----------|
| 37825 | 2577.5 | 37975.0 | 2592.5 | -23.66 | 46.01 | 22.35 | 171.79 | H | 2 |
| 37925 | 2587.5 | 38075.0 | 2602.5 | -24.17 | 46.04 | 21.87 | 153.82 | H | 2 |
| 38025 | 2597.5 | 38175.0 | 2612.5 | -24.00 | 46.14 | 22.14 | 163.68 | H | 2 |
| 37825 | 2577.5 | 37975.0 | 2592.5 | -22.51 | 47.03 | 24.52 | 283.14 | V | 2 |
| 37925 | 2587.5 | 38075.0 | 2602.5 | -23.21 | 47.10 | 23.89 | 244.91 | V | 2 |
| 38025 | 2597.5 | 38175.0 | 2612.5 | -22.83 | 47.17 | 24.34 | 271.64 | V | 2 |

CHANNEL BANDWIDTH: 15MHz+15MHz 16QAM

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|-----------|--------------------|-----------|
| 37825 | 2577.5 | 37975.0 | 2592.5 | -24.52 | 46.01 | 21.49 | 140.93 | H | 2 |
| 37925 | 2587.5 | 38075.0 | 2602.5 | -25.04 | 46.04 | 21.00 | 125.89 | H | 2 |
| 38025 | 2597.5 | 38175.0 | 2612.5 | -24.85 | 46.14 | 21.29 | 134.59 | H | 2 |
| 37825 | 2577.5 | 37975.0 | 2592.5 | -23.37 | 47.03 | 23.66 | 232.27 | V | 2 |
| 37925 | 2587.5 | 38075.0 | 2602.5 | -24.08 | 47.10 | 23.02 | 200.45 | V | 2 |
| 38025 | 2597.5 | 38175.0 | 2612.5 | -23.68 | 47.17 | 23.49 | 223.36 | V | 2 |

CHANNEL BANDWIDTH: 15MHz+15MHz 64QAM

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|-----------|--------------------|-----------|
| 37825 | 2577.5 | 37975.0 | 2592.5 | -25.60 | 46.01 | 20.41 | 109.90 | H | 2 |
| 37925 | 2587.5 | 38075.0 | 2602.5 | -25.95 | 46.04 | 20.09 | 102.09 | H | 2 |
| 38025 | 2597.5 | 38175.0 | 2612.5 | -25.89 | 46.14 | 20.25 | 105.93 | H | 2 |
| 37825 | 2577.5 | 37975.0 | 2592.5 | -24.40 | 47.03 | 22.63 | 183.23 | V | 2 |
| 37925 | 2587.5 | 38075.0 | 2602.5 | -24.97 | 47.10 | 22.13 | 163.31 | V | 2 |
| 38025 | 2597.5 | 38175.0 | 2612.5 | -24.65 | 47.17 | 22.52 | 178.65 | V | 2 |

CHANNEL BANDWIDTH: 20MHz+20MHz QPSK

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|---------------|--------------------|-----------|
| 37850 | 2580.0 | 38048.0 | 2599.8 | -24.24 | 46.05 | 21.81 | 151.71 | H | 2 |
| 37901 | 2585.1 | 38099.0 | 2604.9 | -24.62 | 46.04 | 21.42 | 138.68 | H | 2 |
| 37952 | 2590.2 | 38150.0 | 2610.0 | -24.58 | 46.11 | 21.53 | 142.23 | H | 2 |
| 37825 | 2577.5 | 37975.0 | 2592.5 | -23.09 | 47.07 | 23.98 | 250.03 | V | 2 |
| 37925 | 2587.5 | 38075.0 | 2602.5 | -23.66 | 47.10 | 23.44 | 220.80 | V | 2 |
| 38025 | 2597.5 | 38175.0 | 2612.5 | -23.41 | 47.13 | 23.72 | 235.50 | V | 2 |

CHANNEL BANDWIDTH: 20MHz+20MHz 16QAM

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|-----------|--------------------|-----------|
| 37850 | 2580.0 | 38048.0 | 2599.8 | -25.17 | 46.05 | 20.88 | 122.46 | H | 2 |
| 37901 | 2585.1 | 38099.0 | 2604.9 | -25.69 | 46.04 | 20.35 | 108.39 | H | 2 |
| 37952 | 2590.2 | 38150.0 | 2610.0 | -25.41 | 46.11 | 20.70 | 117.49 | H | 2 |
| 37825 | 2577.5 | 37975.0 | 2592.5 | -24.02 | 47.07 | 23.05 | 201.84 | V | 2 |
| 37925 | 2587.5 | 38075.0 | 2602.5 | -24.73 | 47.10 | 22.37 | 172.58 | V | 2 |
| 38025 | 2597.5 | 38175.0 | 2612.5 | -24.24 | 47.13 | 22.89 | 194.54 | V | 2 |

CHANNEL BANDWIDTH: 20MHz+20MHz 64QAM

| Channel (PCC) | Frequency (MHz) | Channel (SCC) | Frequency (MHz) | SPA LVL (dBm) | Correction Factor(dB) | EIRP (dBm) | EIRP (mW) | Polarization (H/V) | Limit (W) |
|---------------|-----------------|---------------|-----------------|---------------|-----------------------|------------|-----------|--------------------|-----------|
| 37850 | 2580.0 | 38048.0 | 2599.8 | -25.60 | 46.05 | 20.45 | 110.92 | H | 2 |
| 37901 | 2585.1 | 38099.0 | 2604.9 | -25.94 | 46.04 | 20.10 | 102.33 | H | 2 |
| 37952 | 2590.2 | 38150.0 | 2610.0 | -25.87 | 46.11 | 20.24 | 105.68 | H | 2 |
| 37825 | 2577.5 | 37975.0 | 2592.5 | -24.46 | 47.07 | 22.61 | 182.39 | V | 2 |
| 37925 | 2587.5 | 38075.0 | 2602.5 | -25.04 | 47.10 | 22.06 | 160.69 | V | 2 |
| 38025 | 2597.5 | 38175.0 | 2612.5 | -24.73 | 47.13 | 22.40 | 173.78 | V | 2 |

REMARKS: 1. EIRP Output Power (dBm) = SPA LVL (dBm) + Correction Factor (dB).

2. Correction factor (dB) = Free Space Loss + Antenna Factor + Cable Loss

3.2 FREQUENCY STABILITY MEASUREMENT

3.2.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

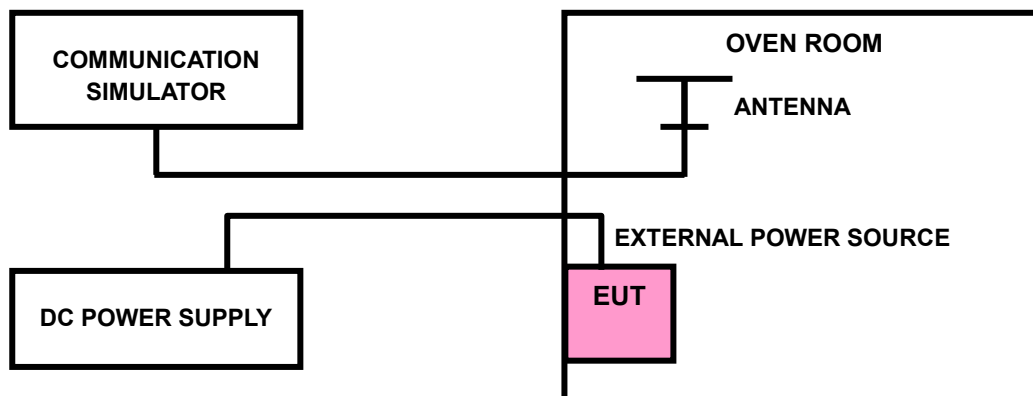
The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

3.2.2 TEST PROCEDURE

- Device is placed at the oven room. The oven room could control the temperatures and humidity. Power warm up is at least 15 min and power applied should perform before recording frequency error.
- EUT is connected the external power supply to control the DC input power. The test voltage range is from minimum to maximum working voltage. Each step shall be record the frequency error rate.
- The temperature range step is 10 degrees in this test items. All temperature levels shall be hold the $\pm 0.5^{\circ}\text{C}$ during the measurement testing. The each temperature step shall be at least 0.5 hours, consider the EUT could be test under the stability condition.

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

3.2.3 TEST SETUP



3.2.4 TEST RESULTS

LTE BAND 7

FREQUENCY ERROR VS. VOLTAGE

| VOLTAGE (Volts) | 5MHz | | LIMIT (ppm) |
|------------------|-----------------------|--------------|-------------|
| | FREQUENCY ERROR (ppm) | | |
| | Low Channel | High Channel | |
| V _{nor} | 0.0005 | 0.0005 | 2.5 |
| V _{min} | -0.0007 | -0.0006 | 2.5 |
| V _{max} | 0.0005 | 0.0005 | 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 | -0.0037 | -0.0038 | 2.5 |
| -20 | -0.0033 | -0.0033 | 2.5 |
| -10 | -0.0029 | -0.0029 | 2.5 |
| 0 | -0.0025 | -0.0025 | 2.5 |
| 10 | -0.0021 | -0.0021 | 2.5 |
| 20 | -0.0017 | -0.0017 | 2.5 |
| 30 | -0.0013 | -0.0013 | 2.5 |
| 40 | -0.0007 | -0.0007 | 2.5 |
| 50 | -0.0002 | -0.0002 | 2.5 |

FREQUENCY ERROR VS. VOLTAGE

| VOLTAGE (Volts) | 10MHz | | LIMIT (ppm) |
|------------------|-----------------------|--------------|-------------|
| | FREQUENCY ERROR (ppm) | | |
| | Low Channel | High Channel | |
| V _{nor} | 0.0006 | 0.0006 | 2.5 |
| V _{min} | -0.0006 | -0.0007 | 2.5 |
| V _{max} | 0.0007 | 0.0005 | 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 | -0.0039 | -0.0040 | 2.5 |
| -20 | -0.0035 | -0.0035 | 2.5 |
| -10 | -0.0027 | -0.0027 | 2.5 |
| 0 | -0.0021 | -0.0021 | 2.5 |
| 10 | -0.0018 | -0.0018 | 2.5 |
| 20 | -0.0015 | -0.0015 | 2.5 |
| 30 | -0.0009 | -0.0009 | 2.5 |
| 40 | -0.0007 | -0.0007 | 2.5 |
| 50 | -0.0003 | -0.0003 | 2.5 |

FREQUENCY ERROR VS. VOLTAGE

| VOLTAGE (Volts) | 15MHz | | LIMIT (ppm) |
|------------------|-----------------------|--------------|-------------|
| | FREQUENCY ERROR (ppm) | | |
| | Low Channel | High Channel | |
| V _{nor} | 0.0006 | 0.0005 | 2.5 |
| V _{min} | -0.0007 | -0.0006 | 2.5 |
| V _{max} | 0.0005 | 0.0005 | 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 | -0.0041 | -0.0041 | 2.5 |
| -20 | -0.0039 | -0.0039 | 2.5 |
| -10 | -0.0030 | -0.0030 | 2.5 |
| 0 | -0.0027 | -0.0027 | 2.5 |
| 10 | -0.0021 | -0.0021 | 2.5 |
| 20 | -0.0016 | -0.0017 | 2.5 |
| 30 | -0.0009 | -0.0009 | 2.5 |
| 40 | -0.0005 | -0.0005 | 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 _{nor} | 0.0005 | 0.0006 | 2.5 |
| V _{min} | -0.0005 | -0.0007 | 2.5 |
| V _{max} | 0.0004 | 0.0005 | 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 | -0.0041 | -0.0041 | 2.5 |
| -20 | -0.0039 | -0.0040 | 2.5 |
| -10 | -0.0035 | -0.0035 | 2.5 |
| 0 | -0.0030 | -0.0030 | 2.5 |
| 10 | -0.0021 | -0.0021 | 2.5 |
| 20 | -0.0018 | -0.0018 | 2.5 |
| 30 | -0.0014 | -0.0014 | 2.5 |
| 40 | -0.0009 | -0.0009 | 2.5 |
| 50 | -0.0002 | -0.0002 | 2.5 |

LTE BAND 38

FREQUENCY ERROR VS. VOLTAGE

| VOLTAGE (Volts) | 5MHz | | LIMIT (ppm) |
|------------------|-----------------------|--------------|-------------|
| | FREQUENCY ERROR (ppm) | | |
| | Low Channel | High Channel | |
| V _{nor} | 0.0005 | 0.0005 | 2.5 |
| V _{min} | -0.0007 | -0.0006 | 2.5 |
| V _{max} | 0.0005 | 0.0005 | 2.5 |

NOTE: The applicant defined the normal working voltage of the battery is from 3.6Vdc to 4.4Vdc.

FREQUENCY ERROR vs. TEMPERATURE.

| TEMP. (°C) | 5MHz | | LIMIT (ppm) |
|------------|-----------------------|--------------|-------------|
| | FREQUENCY ERROR (ppm) | | |
| | Low Channel | High Channel | |
| -30 | -0.0037 | -0.0037 | 2.5 |
| -20 | -0.0032 | -0.0032 | 2.5 |
| -10 | -0.0029 | 2.0000 | 2.5 |
| 0 | -0.0025 | -0.0025 | 2.5 |
| 10 | -0.0020 | -0.0020 | 2.5 |
| 20 | -0.0017 | -0.0016 | 2.5 |
| 30 | -0.0012 | -0.0013 | 2.5 |
| 40 | -0.0007 | -0.0007 | 2.5 |
| 50 | -0.0002 | -0.0002 | 2.5 |

FREQUENCY ERROR VS. VOLTAGE

| VOLTAGE (Volts) | 10MHz | | LIMIT (ppm) |
|------------------|-----------------------|--------------|-------------|
| | FREQUENCY ERROR (ppm) | | |
| | Low Channel | High Channel | |
| V _{nor} | 0.0006 | 0.0007 | 2.5 |
| V _{min} | -0.0006 | -0.0007 | 2.5 |
| V _{max} | 0.0006 | 0.0005 | 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 | -0.0039 | -0.0039 | 2.5 |
| -20 | -0.0033 | -0.0034 | 2.5 |
| -10 | -0.0026 | -0.0026 | 2.5 |
| 0 | -0.0021 | -0.0022 | 2.5 |
| 10 | -0.0018 | -0.0018 | 2.5 |
| 20 | -0.0014 | -0.0014 | 2.5 |
| 30 | -0.0009 | -0.0009 | 2.5 |
| 40 | -0.0007 | -0.0007 | 2.5 |
| 50 | -0.0004 | -0.0004 | 2.5 |

FREQUENCY ERROR VS. VOLTAGE

| VOLTAGE (Volts) | 15MHz | | LIMIT (ppm) |
|------------------|-----------------------|--------------|-------------|
| | FREQUENCY ERROR (ppm) | | |
| | Low Channel | High Channel | |
| V _{nor} | 0.0006 | 0.0006 | 2.5 |
| V _{min} | -0.0007 | -0.0006 | 2.5 |
| V _{max} | 0.0005 | 0.0005 | 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 | -0.0039 | -0.0040 | 2.5 |
| -20 | -0.0036 | -0.0037 | 2.5 |
| -10 | -0.0029 | -0.0030 | 2.5 |
| 0 | -0.0025 | -0.0025 | 2.5 |
| 10 | -0.0021 | -0.0021 | 2.5 |
| 20 | -0.0016 | -0.0016 | 2.5 |
| 30 | -0.0011 | -0.0011 | 2.5 |
| 40 | -0.0006 | -0.0006 | 2.5 |
| 50 | -0.0001 | -0.0002 | 2.5 |

FREQUENCY ERROR VS. VOLTAGE

| VOLTAGE (Volts) | 20MHz | | LIMIT (ppm) |
|------------------|-----------------------|--------------|-------------|
| | FREQUENCY ERROR (ppm) | | |
| | Low Channel | High Channel | |
| V _{nor} | 0.0005 | 0.0006 | 2.5 |
| V _{min} | -0.0005 | -0.0007 | 2.5 |
| V _{max} | 0.0004 | 0.0005 | 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.

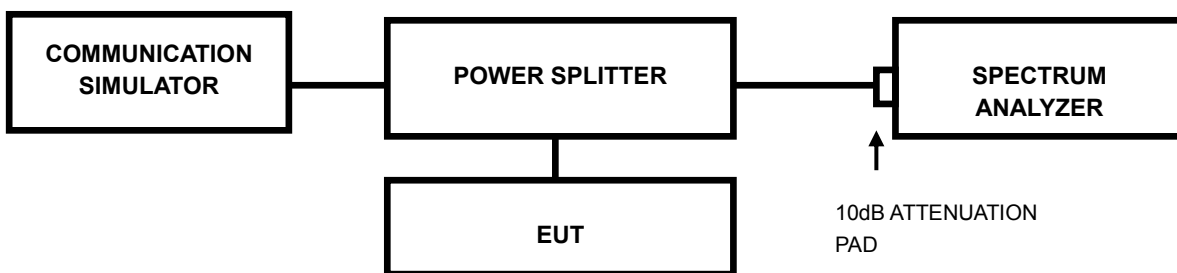
| TEMP. (°C) | 20MHz | | LIMIT (ppm) |
|------------|-----------------------|--------------|-------------|
| | FREQUENCY ERROR (ppm) | | |
| | Low Channel | High Channel | |
| -30 | -0.0041 | -0.0041 | 2.5 |
| -20 | -0.0038 | -0.0039 | 2.5 |
| -10 | -0.0033 | -0.0034 | 2.5 |
| 0 | -0.0030 | -0.0030 | 2.5 |
| 10 | -0.0012 | -0.0022 | 2.5 |
| 20 | -0.0016 | -0.0017 | 2.5 |
| 30 | -0.0012 | -0.0012 | 2.5 |
| 40 | -0.0009 | -0.0009 | 2.5 |
| 50 | -0.0003 | -0.0003 | 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

| LTE BAND 7 | | | | |
|-------------------------|-----------------|------------------------------|-------|-------|
| CHANNEL BANDWIDTH: 5MHz | | | | |
| CHANNEL | FREQUENCY (MHz) | 99% OCCUPIED BANDWIDTH (MHz) | | |
| | | QPSK | 16QAM | 64QAM |
| 20775 | 2502.5 | 4.48 | 4.47 | 4.49 |
| 21100 | 2535 | 4.48 | 4.47 | 4.49 |
| 21425 | 2567.5 | 4.47 | 4.48 | 4.49 |
| CHANNEL | FREQUENCY (MHz) | 26dB BANDWIDTH (MHz) | | |
| | | QPSK | 16QAM | 64QAM |
| 20775 | 2502.5 | 4.86 | 4.87 | 4.89 |
| 21100 | 2535 | 4.49 | 4.89 | 4.49 |
| 21425 | 2567.5 | 4.90 | 4.89 | 4.86 |



| LTE BAND 7 | | | | |
|--------------------------|-----------------|------------------------------|-------|-------|
| CHANNEL BANDWIDTH: 10MHz | | | | |
| CHANNEL | FREQUENCY (MHz) | 99% OCCUPIED BANDWIDTH (MHz) | | |
| | | QPSK | 16QAM | 64QAM |
| 20800 | 2505 | 8.95 | 8.94 | 8.94 |
| 21100 | 2535 | 8.95 | 8.93 | 8.94 |
| 21400 | 2565 | 8.94 | 8.91 | 8.93 |
| CHANNEL | FREQUENCY (MHz) | 26dB BANDWIDTH (MHz) | | |
| | | QPSK | 16QAM | 64QAM |
| 20800 | 2505 | 9.60 | 9.58 | 9.62 |
| 21100 | 2535 | 9.68 | 9.53 | 9.68 |
| 21400 | 2565 | 9.65 | 9.56 | 9.63 |

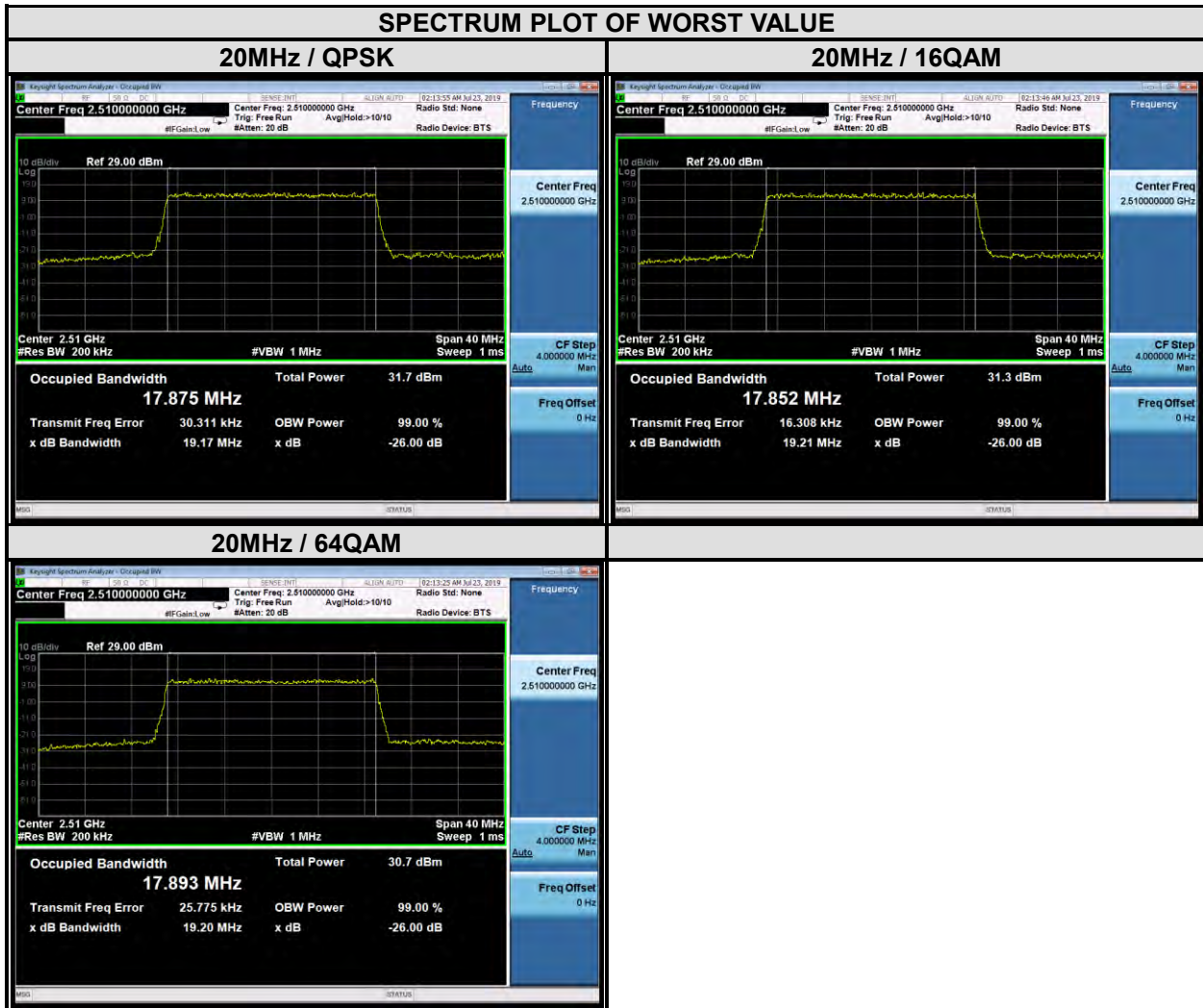
SPECTRUM PLOT OF WORST VALUE



| LTE BAND 7 | | | | |
|--------------------------|-----------------|------------------------------|-------|-------|
| CHANNEL BANDWIDTH: 15MHz | | | | |
| CHANNEL | FREQUENCY (MHz) | 99% OCCUPIED BANDWIDTH (MHz) | | |
| | | QPSK | 16QAM | 64QAM |
| 20825 | 2507.5 | 13.39 | 13.41 | 13.41 |
| 21100 | 2535 | 13.39 | 13.40 | 13.39 |
| 21375 | 2562.5 | 13.36 | 13.38 | 13.36 |
| CHANNEL | FREQUENCY (MHz) | 26dB BANDWIDTH (MHz) | | |
| | | QPSK | 16QAM | 64QAM |
| 20825 | 2507.5 | 14.34 | 14.43 | 14.45 |
| 21100 | 2535 | 14.43 | 14.36 | 14.47 |
| 21375 | 2562.5 | 14.30 | 14.37 | 14.48 |



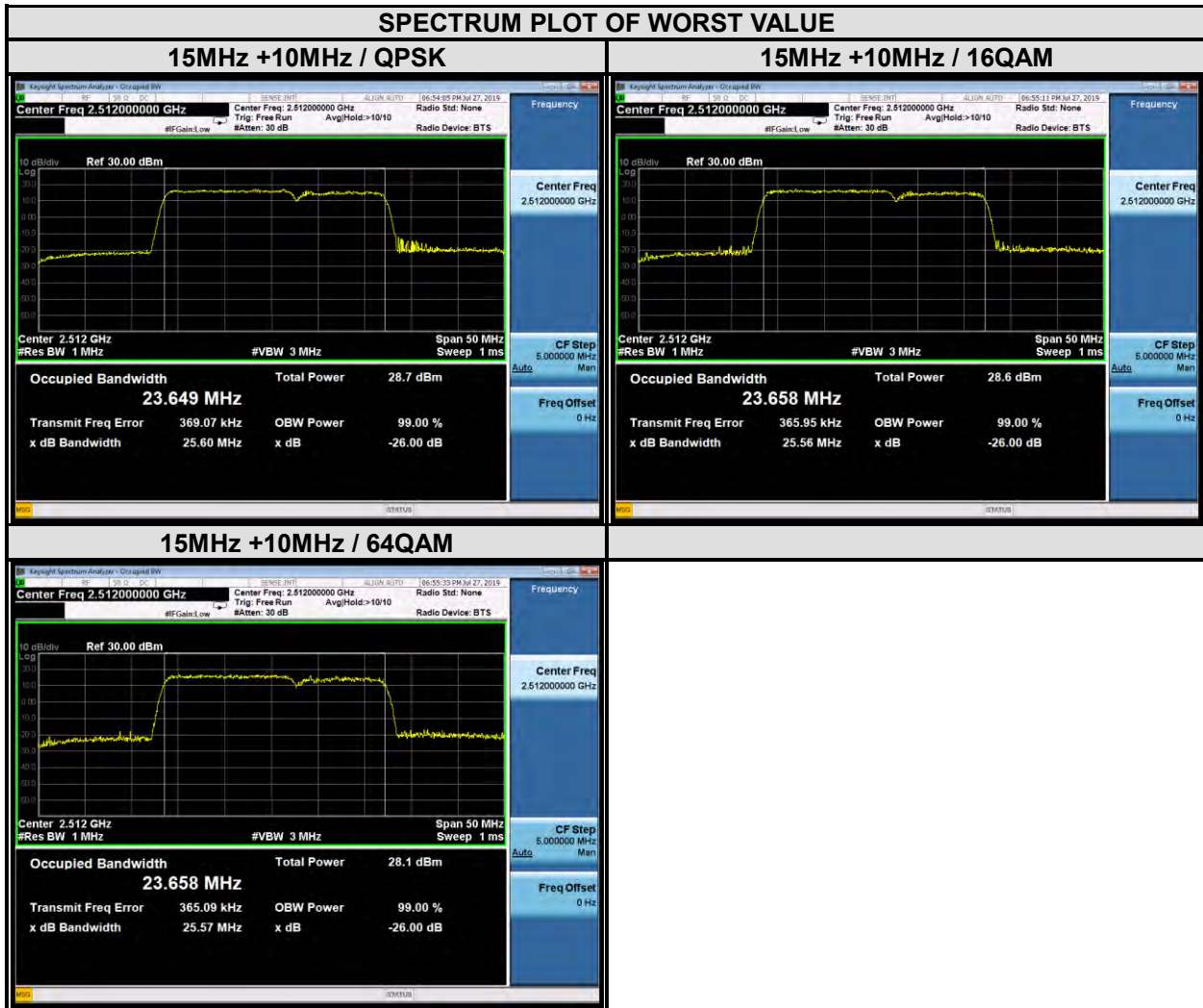
| LTE BAND 7 | | | | |
|--------------------------|-----------------|------------------------------|-------|-------|
| CHANNEL BANDWIDTH: 20MHz | | | | |
| CHANNEL | FREQUENCY (MHz) | 99% OCCUPIED BANDWIDTH (MHz) | | |
| | | QPSK | 16QAM | 64QAM |
| 20850 | 2510 | 17.88 | 17.85 | 17.89 |
| 21100 | 2535 | 17.87 | 17.82 | 17.87 |
| 21350 | 2560 | 17.80 | 17.84 | 17.82 |
| CHANNEL | FREQUENCY (MHz) | 26dB BANDWIDTH (MHz) | | |
| | | QPSK | 16QAM | 64QAM |
| 20850 | 2510 | 19.17 | 19.21 | 19.20 |
| 21100 | 2535 | 19.37 | 18.80 | 18.99 |
| 21350 | 2560 | 19.08 | 18.99 | 19.19 |



| LTE BAND 7 CA | | | | |
|--------------------------------|-------|------------------------------|-------|-------|
| CHANNEL BANDWIDTH: 10MHz+20MHz | | | | |
| CHANNEL | | 99% OCCUPIED BANDWIDTH (MHz) | | |
| PCC | SCC | QPSK | 16QAM | 64QAM |
| 20805 | 20949 | 28.12 | 28.15 | 28.14 |
| 21006 | 21150 | 28.04 | 27.99 | 27.76 |
| 21206 | 21350 | 28.08 | 28.06 | 28.03 |
| CHANNEL | | 26dB BANDWIDTH (MHz) | | |
| PCC | SCC | QPSK | 16QAM | 64QAM |
| 20805 | 20949 | 30.06 | 30.07 | 30.09 |
| 21006 | 21150 | 30.01 | 29.96 | 29.82 |
| 21206 | 21350 | 30.07 | 30.01 | 30.03 |



| LTE BAND 7 CA | | | | |
|---------------------------------|---------|------------------------------|-------|-------|
| CHANNEL BANDWIDTH: 15MHz +10MHz | | | | |
| CHANNEL | CHANNEL | 99% OCCUPIED BANDWIDTH (MHz) | | |
| PCC | SCC | QPSK | 16QAM | 64QAM |
| 20825 | 20975 | 23.65 | 23.66 | 23.66 |
| 21051 | 21171 | 23.56 | 23.53 | 23.54 |
| 21277 | 21397 | 23.55 | 23.48 | 23.48 |
| CHANNEL | CHANNEL | 26dB BANDWIDTH (MHz) | | |
| PCC | SCC | QPSK | 16QAM | 64QAM |
| 20825 | 20975 | 25.60 | 25.56 | 25.57 |
| 21051 | 21171 | 25.57 | 25.52 | 25.54 |
| 21277 | 21397 | 25.57 | 25.43 | 25.41 |



| LTE BAND 7 CA | | | | | |
|---------------------------------|---------|------------------------------|-------|-------|--|
| CHANNEL BANDWIDTH: 15MHz +15MHz | | | | | |
| CHANNEL | CHANNEL | 99% OCCUPIED BANDWIDTH (MHz) | | | |
| PCC | SCC | QPSK | 16QAM | 64QAM | |
| 20825 | 20975 | 28.77 | 28.78 | 28.76 | |
| 21025 | 21175 | 28.70 | 28.70 | 28.74 | |
| 21225 | 21375 | 28.74 | 28.69 | 28.64 | |
| CHANNEL | CHANNEL | 26dB BANDWIDTH (MHz) | | | |
| PCC | SCC | QPSK | 16QAM | 64QAM | |
| 20825 | 20975 | 30.82 | 30.82 | 30.87 | |
| 21025 | 21175 | 30.75 | 28.70 | 30.69 | |
| 21225 | 21375 | 30.83 | 30.81 | 30.71 | |



| LTE BAND 7 CA | | | | |
|---------------------------------|---------|------------------------------|-------|-------|
| CHANNEL BANDWIDTH: 15MHz +20MHz | | | | |
| CHANNEL | CHANNEL | 99% OCCUPIED BANDWIDTH (MHz) | | |
| PCC | SCC | QPSK | 16QAM | 64QAM |
| 20828 | 20999 | 32.98 | 32.95 | 32.96 |
| 21003 | 21174 | 32.86 | 32.87 | 32.88 |
| 21179 | 21350 | 32.92 | 32.94 | 32.97 |
| CHANNEL | CHANNEL | 26dB BANDWIDTH (MHz) | | |
| PCC | SCC | QPSK | 16QAM | 64QAM |
| 20828 | 20999 | 35.16 | 35.08 | 35.08 |
| 21003 | 21174 | 35.15 | 35.01 | 34.99 |
| 21179 | 21350 | 35.20 | 35.07 | 35.04 |



| LTE BAND 7 CA | | | | |
|---------------------------------|---------|------------------------------|-------|-------|
| CHANNEL BANDWIDTH: 20MHz +10MHz | | | | |
| CHANNEL | CHANNEL | 99% OCCUPIED BANDWIDTH (MHz) | | |
| PCC | SCC | QPSK | 16QAM | 64QAM |
| 20850 | 20994 | 28.20 | 28.14 | 28.15 |
| 21051 | 21195 | 28.20 | 28.20 | 28.20 |
| 21251 | 21395 | 28.09 | 28.12 | 28.15 |
| CHANNEL | CHANNEL | 26dB BANDWIDTH (MHz) | | |
| PCC | SCC | QPSK | 16QAM | 64QAM |
| 20850 | 20994 | 31.21 | 30.19 | 31.07 |
| 21051 | 21195 | 30.26 | 30.16 | 30.25 |
| 21251 | 21395 | 30.36 | 30.14 | 29.98 |



| LTE BAND 7 CA | | | | |
|---------------------------------|---------|------------------------------|-------|-------|
| CHANNEL BANDWIDTH: 20MHz +15MHz | | | | |
| CHANNEL | CHANNEL | 99% OCCUPIED BANDWIDTH (MHz) | | |
| PCC | SCC | QPSK | 16QAM | 64QAM |
| 20850 | 21021 | 33.00 | 33.11 | 32.95 |
| 21026 | 21197 | 32.96 | 32.90 | 32.91 |
| 21201 | 21372 | 32.89 | 32.94 | 32.89 |
| CHANNEL | CHANNEL | 26dB BANDWIDTH (MHz) | | |
| PCC | SCC | QPSK | 16QAM | 64QAM |
| 20850 | 21021 | 35.29 | 35.21 | 35.10 |
| 21026 | 21197 | 35.17 | 35.21 | 35.15 |
| 21201 | 21372 | 35.09 | 35.31 | 35.13 |



| LTE BAND 7 CA | | | | |
|---------------------------------|---------|------------------------------|-------|-------|
| CHANNEL BANDWIDTH: 20MHz +20MHz | | | | |
| CHANNEL | CHANNEL | 99% OCCUPIED BANDWIDTH (MHz) | | |
| PCC | SCC | QPSK | 16QAM | 64QAM |
| 20850 | 21048 | 37.81 | 37.72 | 37.78 |
| 21001 | 21199 | 37.76 | 37.71 | 37.69 |
| 21152 | 21350 | 37.87 | 37.87 | 37.80 |
| CHANNEL | CHANNEL | 26dB BANDWIDTH (MHz) | | |
| PCC | SCC | QPSK | 16QAM | 64QAM |
| 20850 | 21048 | 40.04 | 39.96 | 40.06 |
| 21001 | 21199 | 40.01 | 40.02 | 39.86 |
| 21152 | 21350 | 40.05 | 40.09 | 40.02 |



| LTE BAND 38 | | | | |
|------------------------|-----------------|------------------------------|-------|-------|
| CHANNEL BANDWIDTH:5MHz | | | | |
| CHANNEL | FREQUENCY (MHz) | 99% OCCUPIED BANDWIDTH (MHz) | | |
| | | QPSK | 16QAM | 64QAM |
| 37775 | 2572.5 | 4.48 | 4.47 | 4.49 |
| 38000 | 2595 | 4.48 | 4.47 | 4.49 |
| 38225 | 2617.5 | 4.48 | 4.47 | 4.49 |
| CHANNEL | FREQUENCY (MHz) | 26dB BANDWIDTH (MHz) | | |
| | | QPSK | 16QAM | 64QAM |
| 37775 | 2572.5 | 4.91 | 4.88 | 4.85 |
| 38000 | 2595 | 4.92 | 4.88 | 4.85 |
| 38225 | 2617.5 | 4.91 | 4.88 | 4.85 |



| LTE BAND 38 | | | | |
|-------------------------|--------------------|------------------------------|-------|-------|
| CHANNEL BANDWIDTH:10MHZ | | | | |
| CHANNEL | FREQUENCY (MHz) | 99% OCCUPIED BANDWIDTH (MHz) | | |
| | | QPSK | 16QAM | 64QAM |
| 37800 | 2575 | 8.94 | 8.92 | 8.94 |
| 38000 | 2595 | 8.94 | 8.92 | 8.94 |
| 38200 | 2615 | 8.93 | 8.92 | 8.94 |
| CHANNEL | FREQUENCY (MHz) | 26dB BANDWIDTH (MHz) | | |
| | | QPSK | 16QAM | 64QAM |
| 37800 | 2575 | 9.59 | 9.55 | 9.66 |
| 38000 | 2595 | 9.61 | 9.53 | 9.70 |
| 38200 | 2615 | 9.59 | 9.55 | 9.69 |



| LTE BAND 38 | | | | |
|-------------------------|-----------------|------------------------------|-------|-------|
| CHANNEL BANDWIDTH:15MHz | | | | |
| CHANNEL | FREQUENCY (MHz) | 99% OCCUPIED BANDWIDTH (MHz) | | |
| | | QPSK | 16QAM | 64QAM |
| 37825 | 2577.5 | 13.41 | 13.41 | 13.39 |
| 38000 | 2595 | 13.41 | 13.41 | 13.39 |
| 38175 | 2612.5 | 13.42 | 13.41 | 13.38 |
| CHANNEL | FREQUENCY (MHz) | 26dB BANDWIDTH (MHz) | | |
| | | QPSK | 16QAM | 64QAM |
| 37825 | 2577.5 | 14.36 | 14.58 | 14.46 |
| 38000 | 2595 | 14.41 | 14.55 | 14.46 |
| 38175 | 2612.5 | 14.41 | 14.51 | 14.47 |



| LTE BAND 38 | | | | |
|-------------------------|-----------------|------------------------------|-------|-------|
| CHANNEL BANDWIDTH:20MHz | | | | |
| CHANNEL | FREQUENCY (MHz) | 99% OCCUPIED BANDWIDTH (MHz) | | |
| | | QPSK | 16QAM | 64QAM |
| 37850 | 2580 | 17.87 | 17.86 | 17.88 |
| 38000 | 2595 | 17.86 | 17.85 | 17.87 |
| 38150 | 2610 | 17.86 | 17.85 | 17.84 |
| CHANNEL | FREQUENCY (MHz) | 26dB BANDWIDTH (MHz) | | |
| | | QPSK | 16QAM | 64QAM |
| 37850 | 2580 | 19.18 | 19.14 | 19.22 |
| 38000 | 2595 | 19.19 | 19.10 | 19.26 |
| 38150 | 2610 | 19.25 | 19.14 | 19.15 |



| LTE BAND CA_38C | | | | |
|--------------------------------|---------|------------------------------|-------|-------|
| CHANNEL BANDWIDTH: 15MHz+15MHz | | | | |
| CHANNEL | CHANNEL | 99% OCCUPIED BANDWIDTH (MHz) | | |
| PCC | SCC | QPSK | 16QAM | 64QAM |
| 37825 | 37975 | 28.35 | 28.48 | 28.47 |
| 37925 | 38075 | 28.39 | 28.44 | 28.42 |
| 38025 | 38175 | 28.41 | 28.41 | 28.45 |
| CHANNEL | CHANNEL | 26dB BANDWIDTH (MHz) | | |
| PCC | SCC | QPSK | 16QAM | 64QAM |
| 37825 | 37975 | 30.55 | 30.55 | 30.61 |
| 37925 | 38075 | 30.55 | 30.58 | 30.52 |
| 38025 | 38175 | 30.63 | 30.64 | 30.59 |



| LTE BAND CA_38C | | | | |
|--------------------------------|---------|------------------------------|-------|-------|
| CHANNEL BANDWIDTH: 20MHz+20MHz | | | | |
| CHANNEL | CHANNEL | 99% OCCUPIED BANDWIDTH (MHz) | | |
| PCC | SCC | QPSK | 16QAM | 64QAM |
| 37850 | 38048 | 37.47 | 37.37 | 37.45 |
| 37901 | 38099 | 37.46 | 37.39 | 37.30 |
| 37952 | 38150 | 37.44 | 37.52 | 37.39 |
| CHANNEL | CHANNEL | 26dB BANDWIDTH (MHz) | | |
| PCC | SCC | QPSK | 16QAM | 64QAM |
| 37850 | 38048 | 39.91 | 39.79 | 39.85 |
| 37901 | 38099 | 39.85 | 41.68 | 39.81 |
| 37952 | 38150 | 39.82 | 39.94 | 39.77 |

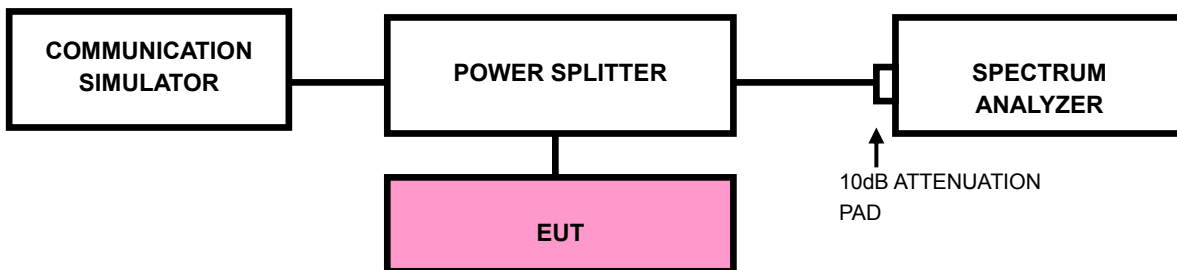


3.5 BAND EDGE MEASUREMENT

3.5.1 LIMITS OF BAND EDGE MEASUREMENT

According to FCC 27.53(m)(4) specified that For mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log (P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log (P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log (P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that $43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log (P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees. For mobile digital stations, in the 1 megahertz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least two percent may be employed.

3.5.2 TEST SETUP



3.5.3 TEST PROCEDURES

- a. The EUT was set up for the maximum peak power with LTE link data modulation. The power was measured with R&S Spectrum Analyzer. All measurements were done at 2 channels (low and high operational frequency range.).
- b. The band edge measurement used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.
- c. The center frequency of spectrum is the band edge frequency and span is 35MHz. RBW of the spectrum is 100kHz and VBW of the spectrum is 300kHz (Channel bandwidth 5MHz).
- d. The center frequency of spectrum is the band edge frequency and span is 50MHz. RBW of the spectrum is 200kHz and VBW of the spectrum is 1MHz (Channel bandwidth 10MHz).
- e. The center frequency of spectrum is the band edge frequency and span is 60MHz. RBW of the spectrum is 300kHz and VBW of the spectrum is 1MHz (Channel bandwidth 15MHz).
- f. The center frequency of spectrum is the band edge frequency and span is 80MHz. RBW of the spectrum is 500kHz and VBW of the spectrum is 2MHz (Channel bandwidth 20MHz).
- g. Record the max trace plot into the test report.

3.5.4 TEST RESULTS

