

# TEST REPORT

Reference No..... : WTD23D03064335W007  
FCC ID ..... : 2AEPIBLACKCPRO  
Applicant..... : COLOMBIANA DE COMERCIO S.A.  
Address..... : Car. 43E No 8-71, Medellin, Colombia  
Manufacturer ..... : Sichuan Koobee Communication Equipment Co., Ltd.  
Address..... : 3 Floor, Building 2, 69 Gangyuan Road West Section, Lingang  
Development Zone, Yibin City, Sichuan Province, China  
Product..... : Smart Phone  
Model(s)..... : BLACK C PRO  
Brand..... : Kalley  
Standards..... : FCC CFR47 Part 22 Subpart H  
FCC CFR47 Part 24 Subpart E  
FCC CFR47 Part 27  
Date of Receipt sample .... : 2023-03-30  
Date of Test ..... : 2023-03-30 to 2023-04-24  
Date of Issue..... : 2023-04-26  
Test Result..... : **Pass**

Remarks:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

**Prepared By:**

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### 3 Revision History

| Test Report No.    | Date of Receipt Sample | Date of Test                   | Date of Issue | Purpose  | Comment | Approved |
|--------------------|------------------------|--------------------------------|---------------|----------|---------|----------|
| WTD23D03064335W007 | 2023-03-30             | 2023-03-30<br>to<br>2023-04-24 | 2023-04-26    | Original | -       | Valid    |

## 4 General Information

### 4.1 General Description of E.U.T.

|                                       |   |
|---------------------------------------|---|
| Product:                              | Smart Phone   |
| Model(s):                             | BLACK C PRO   |
| GSM Band(s):                          | GSM 850/900/1800/1900MHz  |
| GPRS/EGPRS Class:                     | 12  |
| WCDMA Band(s):                        | FDD Band II/IV/V  |
| LTE Band(s):                          | FDD Band 2/4/5/7/12/13/66   |
| Wi-Fi Specification:                  | 2.4G-802.11b/g/n HT20/n HT40<br>5G-802.11a/n(HT20/40)/ac(HT20/40/80)  |
| Bluetooth Version:                    | Bluetooth v5.0 with BLE   |
| GPS:                                  | Support   |
| Hardware Version:                     | KS7U_01   |
| Software Version:                     | KL_S23NU3.FHD.T.RLRBRH.0310_1645.V1.01  |
| Highest frequency<br>(Exclude Radio): | 2.3GHz  |
| Storage Location:                     | Internal Storage  |
| Note:                                 | This EUT has two SIM card slots, and use same one RF module. We found that RF parameters are the same, when we insert the card 1 and card 2. So we usually performed the test under main card slot 1. |

### 4.2 Details of E.U.T.

|                       |   |
|-----------------------|---|
| Operation Frequency:  | LTE Band 2: 1850~1910MHz<br>LTE Band 4: 1710~1755MHz<br>LTE Band 5: 824~849MHz<br>LTE Band 7: 2500~2570MHz<br>LTE Band 12: 699~716MHz<br>LTE Band 13: 777~787MHz<br>LTE Band 66: 1701~1780MHz |
| Max. RF output power: | LTE Band 2: 22.56dBm<br>LTE Band 4: 22.37dBm<br>LTE Band 5: 22.95dBm<br>LTE Band 7: 21.83dBm<br>LTE Band 12: 23.14dBm<br>LTE Band 13: 22.91dBm<br>LTE Band 66: 22.72dBm                       |
| Type of Modulation:   | LTE: QPSK, 16QAM  |
| Antenna installation: | LTE: internal permanent antenna   |

|                   |   |
|-------------------|---|
| Antenna Gain:     | LTE Band 2: -2.2dBi<br>LTE Band 4: -2.5dBi<br>LTE Band 5: -2.8dBi<br>LTE Band 7: -2.3dBi<br>LTE Band 12: -3.0dBi<br>LTE Band 13: -3.0dBi<br>LTE Band 66: -2.5dBi  |
| Ratings:          | Battery: DC 3.87V, 4900mAh<br>DC 5V, 2A charging from adapter   |
| Adapter:          | Model No.: UT-592A-5200ZY<br>Input: 100-240V~, 50/60Hz, 0.35A<br>Output: 5V===2.0A, 10.0W<br>Manufacturer: Shenzhen Baijunda Electronic Co., Ltd.   |
| Type of Emission: | LTE Band 2 1.4MHz: 1M09G7D(QPSK), 1M08W7D(16QAM)<br>LTE Band 2 3MHz: 2M68G7D(QPSK), 2M68W7D(16QAM)<br>LTE Band 2 5MHz: 4M49G7D(QPSK), 4M49W7D(16QAM)<br>LTE Band 2 10 MHz: 8M93G7D(QPSK), 8M93W7D(16QAM)<br>LTE Band 2 15MHz: 13M5G7D(QPSK), 13M5W7D(16QAM)<br>LTE Band 2 20MHz: 17M9G7D(QPSK), 17M9W7D(16QAM)<br>LTE Band 4 1.4MHz: 1M09G7D(QPSK), 1M09W7D(16QAM)<br>LTE Band 4 3MHz: 2M68G7D(QPSK), 2M68W7D(16QAM)<br>LTE Band 4 5MHz: 4M49G7D(QPSK), 4M49W7D(16QAM)<br>LTE Band 4 10 MHz: 8M93G7D(QPSK), 8M93W7D(16QAM)<br>LTE Band 4 15MHz: 13M5G7D(QPSK), 13M5W7D(16QAM)<br>LTE Band 4 20MHz: 17M9G7D(QPSK), 17M9W7D(16QAM)<br>LTE Band 5 1.4MHz: 1M09G7D(QPSK), 1M09W7D(16QAM)<br>LTE Band 5 3MHz: 2M68G7D(QPSK), 2M68W7D(16QAM)<br>LTE Band 5 5MHz: 4M49G7D(QPSK), 4M49W7D(16QAM)<br>LTE Band 5 10 MHz: 8M92G7D(QPSK), 8M92W7D(16QAM)<br>LTE Band 7 5MHz: 4M49G7D(QPSK), 4M49W7D(16QAM)<br>LTE Band 7 10 MHz: 8M93G7D(QPSK), 8M93W7D(16QAM)<br>LTE Band 7 15MHz: 13M5G7D(QPSK), 13M5W7D(16QAM)<br>LTE Band 7 20MHz: 17M9G7D(QPSK), 17M9W7D(16QAM)<br>LTE Band 12 1.4MHz: 1M09G7D(QPSK), 1M09W7D(16QAM)<br>LTE Band 12 3MHz: 2M68G7D(QPSK), 2M68W7D(16QAM)<br>LTE Band 12 5MHz: 4M49G7D(QPSK), 4M49W7D(16QAM)<br>LTE Band 12 10MHz: 8M93G7D(QPSK), 8M92W7D(16QAM)<br>LTE Band 13 5MHz: 4M50G7D(QPSK), 4M49W7D(16QAM)<br>LTE Band 13 10 MHz: 8M92G7D(QPSK), 8M92W7D(16QAM)<br>LTE Band 66 1.4MHz: 1M09G7D(QPSK), 1M08W7D(16QAM)<br>LTE Band 66 3MHz: 2M68G7D(QPSK), 2M68W7D(16QAM) |

LTE Band 66 5MHz: 4M49G7D(QPSK), 4M49W7D(16QAM)

LTE Band 66 10 MHz: 8M93G7D(QPSK), 8M92W7D(16QAM)

LTE Band 66 15MHz: 13M5G7D(QPSK), 13M5W7D(16QAM)

LTE Band 66 20MHz: 17M9G7D(QPSK), 17M9W7D(16QAM)

### 4.3 Test Mode

All test mode(s) and condition(s) mentioned were considered and evaluated respectively by performing full tests, the worst data were recorded and reported.

| Support Band | Test Mode BW(MHz) | Channel Frequency | Channel Number |
|--------------|-------------------|-------------------|----------------|
| LTE Band 2   | 1.4               | 1850.7 MHz        | 18607          |
|              |                   | 1880.0 MHz        | 18900          |
|              |                   | 1909.3 MHz        | 19193          |
|              | 3                 | 1851.5 MHz        | 18615          |
|              |                   | 1880.0 MHz        | 18900          |
|              |                   | 1908.5 MHz        | 19185          |
|              | 5                 | 1852.5 MHz        | 18625          |
|              |                   | 1880.0 MHz        | 18900          |
|              |                   | 1907.5 MHz        | 19175          |
|              | 10                | 1855.0 MHz        | 18650          |
|              |                   | 1880.0 MHz        | 18900          |
|              |                   | 1905.0 MHz        | 19150          |
|              | 15                | 1857.5 MHz        | 18675          |
|              |                   | 1880.0 MHz        | 18900          |
|              |                   | 1902.5 MHz        | 19125          |
| 20           | 1860.0 MHz        | 18700             |                |
|              | 1880.0 MHz        | 18900             |                |
|              | 1900.0 MHz        | 19100             |                |
| LTE Band 4   | 1.4               | 1710.7 MHz        | 19957          |
|              |                   | 1732.5 MHz        | 20175          |
|              |                   | 1754.3 MHz        | 20393          |
|              | 3                 | 1711.5 MHz        | 19965          |
|              |                   | 1732.5 MHz        | 20175          |
|              |                   | 1753.5 MHz        | 20385          |
|              | 5                 | 1712.5 MHz        | 19975          |
|              |                   | 1732.5 MHz        | 20175          |
|              |                   | 1752.5 MHz        | 20375          |
|              | 10                | 1715.0 MHz        | 20000          |
|              |                   | 1732.5 MHz        | 20175          |
|              |                   | 1750.0 MHz        | 20350          |
|              | 15                | 1717.5 MHz        | 20025          |
|              |                   | 1732.5 MHz        | 20175          |
|              |                   | 1747.5 MHz        | 20325          |
| 20           | 1720.0 MHz        | 20050             |                |
|              | 1732.5 MHz        | 20175             |                |
|              | 1745.0 MHz        | 20300             |                |
| LTE Band 5   | 1.4               | 824.7 MHz         | 20407          |
|              |                   | 836.5 MHz         | 20525          |
|              |                   | 848.3 MHz         | 20643          |
|              | 3                 | 825.5 MHz         | 20415          |
|              |                   | 836.5 MHz         | 20525          |
|              |                   | 847.5 MHz         | 20635          |
| 5            | 826.5 MHz         | 20425             |                |
|              | 836.5 MHz         | 20525             |                |



|             |     |            |        |
|-------------|-----|------------|--------|
|             | 10  | 846.5 MHz  | 20625  |
|             |     | 829.0 MHz  | 20450  |
|             |     | 836.5 MHz  | 20525  |
|             |     | 844.0 MHz  | 20600  |
| LTE Band 7  | 5   | 2502.5 MHz | 20775  |
|             |     | 2535.0 MHz | 21100  |
|             |     | 2567.5 MHz | 21425  |
|             | 10  | 2505.0 MHz | 20800  |
|             |     | 2535.0 MHz | 21100  |
|             |     | 2565.0 MHz | 21400  |
|             | 15  | 2507.5 MHz | 20825  |
|             |     | 2535.0 MHz | 21100  |
|             |     | 2562.5 MHz | 21375  |
|             | 20  | 2510.0 MHz | 20850  |
|             |     | 2535.0 MHz | 21100  |
|             |     | 2560.0 MHz | 21350  |
| LTE Band 12 | 1.4 | 699.7 MHz  | 23017  |
|             |     | 707.5 MHz  | 23095  |
|             |     | 715.3 MHz  | 23173  |
|             | 3   | 700.5 MHz  | 23025  |
|             |     | 707.5 MHz  | 23095  |
|             |     | 714.5 MHz  | 23165  |
|             | 5   | 701.5 MHz  | 23035  |
|             |     | 707.5 MHz  | 23095  |
|             |     | 713.5 MHz  | 23155  |
|             | 10  | 704.0 MHz  | 23060  |
|             |     | 707.5 MHz  | 23095  |
|             |     | 711.0 MHz  | 23130  |
| LTE Band 13 | 5   | 779.5 MHz  | 23205  |
|             |     | 782.0 MHz  | 23230  |
|             |     | 784.5 MHz  | 23255  |
|             | 10  | 782.0 MHz  | 23230  |
| LTE Band 66 | 1.4 | 1701.7MHz  | 131979 |
|             |     | 1744.9 MHz | 132321 |
|             |     | 1779.2 MHz | 132664 |
|             | 3   | 1711.5 MHz | 131987 |
|             |     | 1744.9 MHz | 132321 |
|             |     | 1778.4MHz  | 132656 |
|             | 5   | 1712.5 MHz | 131997 |
|             |     | 1744.9 MHz | 132321 |
|             |     | 1777.4     | 132646 |
|             | 10  | 1715.0 MHz | 132022 |
|             |     | 1744.9 MHz | 132321 |
|             |     | 1774.9 MHz | 132621 |
|             | 15  | 1722.5 MHz | 132097 |
|             |     | 1744.9 MHz | 132321 |
|             |     | 1767.4 MHz | 132546 |
|             | 20  | 1720.0 MHz | 132072 |
| 1744.9 MHz  |     | 132321     |        |

|  |  |            |        |
|--|--|------------|--------|
|  |  | 1759.9 MHz | 132471 |
| Remark: All mode(s) were tested and the worst data was recorded. |  |            |        |

#### 4.4 Test Facility

The test facility has a test site registered with the following organizations:

**ISED CAB identifier: CN0013. Test Firm Registration No.: 7760A.**

Waltek Testing Group Co., Ltd. Has been registered and fully described in a report filed with the Industry Canada. The acceptance letter from the Industry Canada is maintained in our files. Registration number 7760A, October 15, 2016.

**FCC Designation No.: CN1201. Test Firm Registration No.: 523476.**

Waltek Testing Group Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration number 523476, September 10, 2019.

## 5 Test Summary

| Test Items                             | Test Requirement   | Result |
|--|--|--------|
| RF Output Power                        | 2.1046<br>22.913 (a)<br>24.232 (c)<br>27.50(h.2)<br>27.50(d.4) | PASS   |
| Peak-to-Average Ratio                  | 24.232 (d)<br>27.50(d)   | PASS   |
| Bandwidth                              | 2.1049<br>22.905<br>22.917<br>24.238<br>27.53(a)               | PASS   |
| Spurious Emissions at Antenna Terminal | 2.1051<br>22.917 (a)<br>24.238 (a)<br>27.53(h)<br>27.53(m)(4)  | PASS   |
| Field Strength of Spurious Radiation   | 2.1053<br>22.917 (a)<br>24.238 (a)<br>27.53(h)<br>27.53(m)(4)  | PASS   |
| Out of band emission                   | 22.917 (a)<br>24.238 (a)<br>27.53(h)<br>27.53(m)(4)            | PASS   |
| Frequency Stability                    | 2.1055<br>22.355<br>24.235<br>27.5(h)<br>27.54                 | PASS   |
| Maximum Permissible Exposure<br>(SAR)  | 1.1307<br>2.1093   | PASS   |

## 6 Equipment Used during Test

### 6.1 Equipments List

| Conducted Emissions Test Site 1#                              |                                      |                                  |              |            |                       |                      |
|---|--------------------------------------|----------------------------------|--------------|------------|-----------------------|----------------------|
| Item  | Equipment                            | Manufacturer                     | Model No.    | Serial No. | Last Calibration Date | Calibration Due Date |
| 1.  | EMI Test Receiver                    | R&S                              | ESCI         | 100947     | 2022-08-01            | 2023-07-31           |
| 2.  | LISN                                 | R&S                              | ENV216       | 101215     | 2022-08-01            | 2023-07-31           |
| 3.  | Cable                                | Top                              | TYPE16(3.5M) | -          | 2022-08-01            | 2023-07-31           |
| 3m Semi-anechoic Chamber for Radiation Emissions Test site 1# |                                      |                                  |              |            |                       |                      |
| Item  | Equipment                            | Manufacturer                     | Model No.    | Serial No. | Last Calibration Date | Calibration Due Date |
| 1   | Spectrum Analyzer                    | R&S                              | FSP          | 100091     | 2022-04-28            | 2023-04-27           |
| 2   | Trilog Broadband Antenna             | SCHWARZBECK                      | VULB9163     | 336        | 2022-08-01            | 2023-07-31           |
| 3   | Coaxial Cable (below 1GHz)           | Top                              | TYPE16(13M)  | -          | 2022-08-07            | 2023-08-06           |
| 4   | Broad-band Horn Antenna              | SCHWARZBECK                      | BBHA 9120 D  | 667        | 2022-04-28            | 2023-04-27           |
| 5   | Broad-band Horn Antenna              | SCHWARZBECK                      | BBHA 9170    | 335        | 2022-04-28            | 2023-04-27           |
| 6   | Broadband Preamplifier               | COMPLIANCE DIRECTION             | PAP-1G18     | 2004       | 2022-07-29            | 2023-07-28           |
| 7   | Coaxial Cable (above 1GHz)           | Top                              | 1GHz-25GHz   | EW02014-7  | 2022-04-28            | 2023-04-27           |
| 8   | Universal Radio Communication Tester | R&S                              | CMW 500      | 127818     | 2022-04-28            | 2023-04-27           |
| 9   | Signal Generator                     | R&S                              | SMP22        | 100102     | 2022-08-01            | 2023-07-31           |
| 10  | Smart Antenna                        | SCHWARZBECK                      | HA08         | -          | 2022-04-28            | 2023-04-27           |
| 3m Semi-anechoic Chamber for Radiation Emissions Test site 2# |                                      |                                  |              |            |                       |                      |
| Item  | Equipment                            | Manufacturer                     | Model No.    | Serial No  | Last Calibration Date | Calibration Due Date |
| 1   | Test Receiver                        | R&S                              | ESCI         | 101296     | 2022-04-28            | 2023-04-27           |
| 2   | Trilog Broadband Antenna             | SCHWARZBECK                      | VULB9160     | 9160-3325  | 2022-10-30            | 2023-10-29           |
| 3   | Active Loop Antenna                  | Beijing Dazhi                    | ZN30900A     | -          | 2022-05-02            | 2023-05-01           |
| 4   | Amplifier                            | Compliance pirection systems inc | PAP-0203     | 22024      | 2022-04-28            | 2023-04-27           |
| 5   | Cable                                | HUBER+SUHNER                     | CBL2         | 525178     | 2022-04-28            | 2023-04-27           |

| RF Conducted Testing |                                      |              |           |            |                       |                      |
|----------------------|--------------------------------------|--------------|-----------|------------|-----------------------|----------------------|
| Item                 | Equipment                            | Manufacturer | Model No. | Serial No. | Last Calibration Date | Calibration Due Date |
| 1.                   | Spectrum Analyzer                    | Agilent      | N9020A    | MY49100060 | 2022-08-01            | 2023-07-31           |
| 2.                   | Universal Radio Communication Tester | R&S          | CMW 500   | 127818     | 2022-04-28            | 2023-04-27           |

## 6.2 Measurement Uncertainty

| Parameter                                       | Uncertainty                             |
|---|---|
| Conducted Emission                              | ± 3.64 dB(AC mains 150KHz~30MHz)        |
| Radiated Spurious Emissions                     | ± 5.08 dB (Bilog antenna 30M~1000MHz)   |
|   | ± 5.47 dB (Horn antenna 1000M~25000MHz) |
| Radio Frequency                                 | ± 1 x 10 <sup>-7</sup> Hz               |
| RF Power  | ± 0.42 dB                               |
| RF Power Density                                | ± 0.7dB                                 |
| Conducted Spurious Emissions                    | ± 2.76 dB (9kHz~26500MHz)               |
| Confidence interval: 95%. Confidence factor:k=2 |   |

## 7 RF Output Power

|                   |   |
|-------------------|---|
| Test Requirement: | FCC Part 2.1046, 22.913 (a), 24.232 (c), 27.50(h.2); 27.50(d.4) |
| Test Method:      | ANSI C63.26:2015<br>ANSI/TIA-603-E:2016                         |
| Test Mode:        | TX transmitting   |

### 7.1 EUT Operation

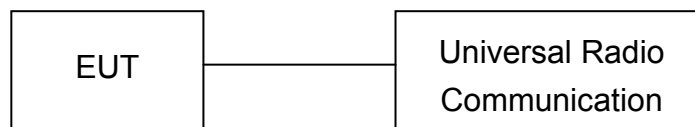
Operating Environment :

|                       |           |
|-----------------------|-----------|
| Temperature:          | 22.5 °C   |
| Humidity:             | 52.1 % RH |
| Atmospheric Pressure: | 101.2kPa  |

### 7.2 Test Procedure

Conducted method:

The RF output of the transmitter was connected to the wireless test set and the spectrum analyzer through sufficient attenuation.



Radiated method:

1. The setup of EUT is according with per TIA/EIA Standard 603D:2010.
2. The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. The test was performed by placing the EUT on 3-orthogonal axis.
3. The frequency range up to tenth harmonic of the fundamental frequency was investigated.
4. Remove the EUT and replace it with substitution antenna. A signal generator was connected to the substitution antenna by a non-radiating cable. The absolute levels of the spurious emissions were measured by the substitution.

## 7.3 Test Result

## Conducted Power

## LTE Band 2:

| BW(MHz) | Ch    | Freq(MHz) | Mode  | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|-------|-----------|-------|------------------|--------------|---------------------|----------------------|----------|
| 1.4MHz  | 18607 | 1850.7    | QPSK  | 1                | 0            | 21.94               | 21.5±1               | /        |
|         |       |           |       | 1                | 2            | 22.13               | 21.5±1               | /        |
|         |       |           |       | 1                | 5            | 21.93               | 21.5±1               | /        |
|         |       |           |       | 3                | 0            | 22.06               | 21.5±1               | /        |
|         |       |           |       | 3                | 1            | 22.04               | 21.5±1               | /        |
|         |       |           |       | 3                | 2            | 21.96               | 21.5±1               | /        |
|         |       |           | 6     | 0                | 20.96        | 21.5±1              | 1.0                  |          |
|         |       |           | 6     | 0                | 20.96        | 21.5±1              | 1.0                  |          |
|         |       |           | 16QAM | 1                | 0            | 21.04               | 21.0±1               | 1.0      |
|         |       |           |       | 1                | 2            | 21.24               | 21.0±1               | 1.0      |
|         |       |           |       | 1                | 5            | 21.04               | 21.0±1               | 1.0      |
|         |       |           |       | 3                | 0            | 20.98               | 21.0±1               | 1.0      |
|         | 3     | 1         |       | 21               | 21.0±1       | 1.0                 |                      |          |
|         | 3     | 2         |       | 21.01            | 21.0±1       | 1.0                 |                      |          |
|         | 6     | 0         | 20.08 | 21.0±1           | 1.0          |                     |                      |          |
|         | 18900 | 1880      | QPSK  | 1                | 0            | 22.33               | 22.0±1               | /        |
|         |       |           |       | 1                | 2            | 22.49               | 22.0±1               | /        |
|         |       |           |       | 1                | 5            | 22.37               | 22.0±1               | /        |
|         |       |           |       | 3                | 0            | 22.43               | 22.0±1               | /        |
|         |       |           |       | 3                | 1            | 22.41               | 22.0±1               | /        |
|         |       |           |       | 3                | 2            | 22.41               | 22.0±1               | /        |
|         |       |           | 6     | 0                | 21.38        | 22.0±1              | 1.0                  |          |
|         |       |           | 16QAM | 1                | 0            | 21.65               | 21.0±1               | 1.0      |
|         |       |           |       | 1                | 2            | 21.85               | 21.0±1               | 1.0      |
|         |       |           |       | 1                | 5            | 21.68               | 21.0±1               | 1.0      |
|         |       |           |       | 3                | 0            | 21.56               | 21.0±1               | 1.0      |
|         |       |           |       | 3                | 1            | 21.6                | 21.0±1               | 1.0      |
|         | 3     | 2         |       | 21.56            | 21.0±1       | 1.0                 |                      |          |
|         | 6     | 0         | 20.29 | 21.0±1           | 1.0          |                     |                      |          |
|         | 19193 | 1909.3    | QPSK  | 1                | 0            | 22.37               | 22.0±1               | /        |
| 1       |       |           |       | 2                | 22.55        | 22.0±1              | /                    |          |
| 1       |       |           |       | 5                | 22.35        | 22.0±1              | /                    |          |
| 3       |       |           |       | 0                | 22.44        | 22.0±1              | /                    |          |
| 3       |       |           |       | 1                | 22.48        | 22.0±1              | /                    |          |
| 3       |       |           |       | 2                | 22.45        | 22.0±1              | /                    |          |
| 6       |       |           | 0     | 21.43            | 22.0±1       | 1.0                 |                      |          |
| 16QAM   |       |           | 1     | 0                | 21.37        | 21.5±1              | 1.0                  |          |
|         |       |           | 1     | 2                | 21.5         | 21.5±1              | 1.0                  |          |
|         |       |           | 1     | 5                | 21.33        | 21.5±1              | 1.0                  |          |
|         |       |           | 3     | 0                | 21.54        | 21.5±1              | 1.0                  |          |
|         |       |           | 3     | 1                | 21.65        | 21.5±1              | 1.0                  |          |
|         | 3     | 2         | 21.59 | 21.5±1           | 1.0          |                     |                      |          |



|  |  |  |  |   |   |      |        |     |
|--|--|--|--|---|---|------|--------|-----|
|  |  |  |  | 6 | 0 | 20.6 | 21.5±1 | 1.0 |
|--|--|--|--|---|---|------|--------|-----|

| BW(MHz) | Ch    | Freq(MHz) | Mode  | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|-------|-----------|-------|------------------|--------------|---------------------|----------------------|----------|
| 3MHz    | 18615 | 1851.5    | QPSK  | 1                | 0            | 21.9                | 21.5±1               | /        |
|         |       |           |       | 1                | 8            | 21.89               | 21.5±1               | /        |
|         |       |           |       | 1                | 14           | 21.88               | 21.5±1               | /        |
|         |       |           |       | 6                | 0            | 20.92               | 21.5±1               | 1.0      |
|         |       |           |       | 6                | 4            | 20.93               | 21.5±1               | 1.0      |
|         |       |           |       | 6                | 9            | 20.9                | 21.5±1               | 1.0      |
|         |       |           |       | 15               | 0            | 21.03               | 21.5±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 20.94               | 21.0±1               | 1.0      |
|         |       |           |       | 1                | 8            | 20.89               | 21.0±1               | 1.0      |
|         |       |           |       | 1                | 14           | 20.97               | 21.0±1               | 1.0      |
|         |       |           |       | 6                | 0            | 20.16               | 21.0±1               | 1.0      |
|         |       |           |       | 6                | 4            | 20.18               | 21.0±1               | 1.0      |
|         |       |           |       | 6                | 9            | 20.14               | 21.0±1               | 1.0      |
|         |       |           |       | 15               | 0            | 20.05               | 21.0±1               | 1.0      |
|         | 18900 | 1880      | QPSK  | 1                | 0            | 22.42               | 22.0±1               | /        |
|         |       |           |       | 1                | 8            | 22.42               | 22.0±1               | /        |
|         |       |           |       | 1                | 14           | 22.44               | 22.0±1               | /        |
|         |       |           |       | 6                | 0            | 21.45               | 22.0±1               | 1.0      |
|         |       |           |       | 6                | 4            | 21.46               | 22.0±1               | 1.0      |
|         |       |           |       | 6                | 9            | 21.45               | 22.0±1               | 1.0      |
|         |       |           |       | 15               | 0            | 21.44               | 22.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 21.78               | 21.0±1               | 1.0      |
|         |       |           |       | 1                | 8            | 21.78               | 21.0±1               | 1.0      |
|         |       |           |       | 1                | 14           | 21.83               | 21.0±1               | 1.0      |
|         |       |           |       | 6                | 0            | 20.53               | 21.0±1               | 1.0      |
|         |       |           |       | 6                | 4            | 20.51               | 21.0±1               | 1.0      |
|         |       |           |       | 6                | 9            | 20.46               | 21.0±1               | 1.0      |
|         |       |           |       | 15               | 0            | 20.46               | 21.0±1               | 1.0      |
|         | 19185 | 1908.5    | QPSK  | 1                | 0            | 22.5                | 22.0±1               | /        |
|         |       |           |       | 1                | 8            | 22.47               | 22.0±1               | /        |
| 1       |       |           |       | 14               | 22.5         | 22.0±1              | /                    |          |
| 6       |       |           |       | 0                | 21.48        | 22.0±1              | 1.0                  |          |
| 6       |       |           |       | 4                | 21.48        | 22.0±1              | 1.0                  |          |
| 6       |       |           |       | 9                | 21.46        | 22.0±1              | 1.0                  |          |
| 15      |       |           |       | 0                | 21.44        | 22.0±1              | 1.0                  |          |
| 16QAM   |       |           | 1     | 0                | 21.5         | 21.0±1              | 1.0                  |          |
|         |       |           | 1     | 8                | 21.43        | 21.0±1              | 1.0                  |          |
|         |       |           | 1     | 14               | 21.44        | 21.0±1              | 1.0                  |          |
|         |       |           | 6     | 0                | 20.49        | 21.0±1              | 1.0                  |          |
|         |       |           | 6     | 4                | 20.52        | 21.0±1              | 1.0                  |          |
|         |       |           | 6     | 9                | 20.48        | 21.0±1              | 1.0                  |          |
|         |       |           | 15    | 0                | 20.41        | 21.0±1              | 1.0                  |          |

| BW(MHz) | Ch    | Freq(MHz) | Mode  | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|-------|-----------|-------|------------------|--------------|---------------------|----------------------|----------|
| 5MHz    | 18625 | 1852.5    | QPSK  | 1                | 0            | 21.94               | 21.5±1               | /        |
|         |       |           |       | 1                | 12           | 22.05               | 21.5±1               | /        |
|         |       |           |       | 1                | 24           | 21.99               | 21.5±1               | /        |
|         |       |           |       | 12               | 0            | 21.02               | 21.5±1               | 1.0      |
|         |       |           |       | 12               | 6            | 21.07               | 21.5±1               | 1.0      |
|         |       |           |       | 12               | 11           | 20.97               | 21.5±1               | 1.0      |
|         |       |           |       | 25               | 0            | 21                  | 21.5±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 21.09               | 21.0±1               | 1.0      |
|         |       |           |       | 1                | 12           | 21.19               | 21.0±1               | 1.0      |
|         |       |           |       | 1                | 24           | 21.14               | 21.0±1               | 1.0      |
|         |       |           |       | 12               | 0            | 20.08               | 21.0±1               | 1.0      |
|         |       |           |       | 12               | 6            | 20.11               | 21.0±1               | 1.0      |
|         |       |           |       | 12               | 11           | 20.09               | 21.0±1               | 1.0      |
|         |       |           |       | 25               | 0            | 20.04               | 21.0±1               | 1.0      |
|         | 18900 | 1880      | QPSK  | 1                | 0            | 22.22               | 22.0±1               | /        |
|         |       |           |       | 1                | 12           | 22.33               | 22.0±1               | /        |
|         |       |           |       | 1                | 24           | 22.3                | 22.0±1               | /        |
|         |       |           |       | 12               | 0            | 21.32               | 22.0±1               | 1.0      |
|         |       |           |       | 12               | 6            | 21.37               | 22.0±1               | 1.0      |
|         |       |           |       | 12               | 11           | 21.3                | 22.0±1               | 1.0      |
|         |       |           |       | 25               | 0            | 21.33               | 22.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 21.71               | 21.0±1               | 1.0      |
|         |       |           |       | 1                | 12           | 21.85               | 21.0±1               | 1.0      |
|         |       |           |       | 1                | 24           | 21.78               | 21.0±1               | 1.0      |
|         |       |           |       | 12               | 0            | 20.4                | 21.0±1               | 1.0      |
|         |       |           |       | 12               | 6            | 20.48               | 21.0±1               | 1.0      |
|         |       |           |       | 12               | 11           | 20.46               | 21.0±1               | 1.0      |
|         |       |           |       | 25               | 0            | 20.38               | 21.0±1               | 1.0      |
|         | 19175 | 1907.5    | QPSK  | 1                | 0            | 22.26               | 22.0±1               | /        |
|         |       |           |       | 1                | 12           | 22.37               | 22.0±1               | /        |
| 1       |       |           |       | 24               | 22.28        | 22.0±1              | /                    |          |
| 12      |       |           |       | 0                | 21.37        | 22.0±1              | 1.0                  |          |
| 12      |       |           |       | 6                | 21.38        | 22.0±1              | 1.0                  |          |
| 12      |       |           |       | 11               | 21.29        | 22.0±1              | 1.0                  |          |
| 25      |       |           |       | 0                | 21.3         | 22.0±1              | 1.0                  |          |
| 16QAM   |       |           | 1     | 0                | 21.33        | 21.0±1              | 1.0                  |          |
|         |       |           | 1     | 12               | 21.46        | 21.0±1              | 1.0                  |          |
|         |       |           | 1     | 24               | 21.39        | 21.0±1              | 1.0                  |          |
|         |       |           | 12    | 0                | 20.4         | 21.0±1              | 1.0                  |          |
|         |       |           | 12    | 6                | 20.4         | 21.0±1              | 1.0                  |          |
|         |       |           | 12    | 11               | 20.29        | 21.0±1              | 1.0                  |          |
|         |       |           | 25    | 0                | 20.28        | 21.0±1              | 1.0                  |          |

| BW(MHz) | Ch    | Freq(MHz) | Mode  | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|-------|-----------|-------|------------------|--------------|---------------------|----------------------|----------|
| 10MHz   | 18650 | 1855      | QPSK  | 1                | 0            | 21.99               | 22.0±1               | /        |
|         |       |           |       | 1                | 24           | 22.13               | 22.0±1               | /        |
|         |       |           |       | 1                | 49           | 21.97               | 22.0±1               | /        |
|         |       |           |       | 25               | 0            | 21.03               | 22.0±1               | 1.0      |
|         |       |           |       | 25               | 12           | 21.05               | 22.0±1               | 1.0      |
|         |       |           |       | 25               | 24           | 21.12               | 22.0±1               | 1.0      |
|         |       |           |       | 50               | 0            | 21.1                | 22.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 20.91               | 21.0±1               | 1.0      |
|         |       |           |       | 1                | 24           | 21.07               | 21.0±1               | 1.0      |
|         |       |           |       | 1                | 49           | 20.9                | 21.0±1               | 1.0      |
|         |       |           |       | 25               | 0            | 20.06               | 21.0±1               | 1.0      |
|         |       |           |       | 25               | 12           | 20.07               | 21.0±1               | 1.0      |
|         |       |           |       | 25               | 24           | 20.14               | 21.0±1               | 1.0      |
|         |       |           |       | 50               | 0            | 20.06               | 21.0±1               | 1.0      |
|         | 18900 | 1880      | QPSK  | 1                | 0            | 22.34               | 22.0±1               | /        |
|         |       |           |       | 1                | 24           | 22.51               | 22.0±1               | /        |
|         |       |           |       | 1                | 49           | 22.37               | 22.0±1               | /        |
|         |       |           |       | 25               | 0            | 21.42               | 22.0±1               | 1.0      |
|         |       |           |       | 25               | 12           | 21.42               | 22.0±1               | 1.0      |
|         |       |           |       | 25               | 24           | 21.39               | 22.0±1               | 1.0      |
|         |       |           |       | 50               | 0            | 21.41               | 22.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 21.65               | 21.0±1               | 1.0      |
|         |       |           |       | 1                | 24           | 21.83               | 21.0±1               | 1.0      |
|         |       |           |       | 1                | 49           | 21.74               | 21.0±1               | 1.0      |
|         |       |           |       | 25               | 0            | 20.46               | 21.0±1               | 1.0      |
|         |       |           |       | 25               | 12           | 20.45               | 21.0±1               | 1.0      |
|         |       |           |       | 25               | 24           | 20.44               | 21.0±1               | 1.0      |
|         |       |           |       | 50               | 0            | 20.42               | 21.0±1               | 1.0      |
|         | 19150 | 1905      | QPSK  | 1                | 0            | 22.32               | 22.0±1               | /        |
|         |       |           |       | 1                | 24           | 22.54               | 22.0±1               | /        |
| 1       |       |           |       | 49               | 22.34        | 22.0±1              | /                    |          |
| 25      |       |           |       | 0                | 21.39        | 22.0±1              | 1.0                  |          |
| 25      |       |           |       | 12               | 21.33        | 22.0±1              | 1.0                  |          |
| 25      |       |           |       | 24               | 21.26        | 22.0±1              | 1.0                  |          |
| 50      |       |           |       | 0                | 21.32        | 22.0±1              | 1.0                  |          |
| 16QAM   |       |           | 1     | 0                | 21.31        | 21.0±1              | 1.0                  |          |
|         |       |           | 1     | 24               | 21.45        | 21.0±1              | 1.0                  |          |
|         |       |           | 1     | 49               | 21.29        | 21.0±1              | 1.0                  |          |
|         |       |           | 25    | 0                | 20.48        | 21.0±1              | 1.0                  |          |
|         |       |           | 25    | 12               | 20.4         | 21.0±1              | 1.0                  |          |
|         |       |           | 25    | 24               | 20.34        | 21.0±1              | 1.0                  |          |
|         |       |           | 50    | 0                | 20.32        | 21.0±1              | 1.0                  |          |

| BW(MHz) | Ch    | Freq(MHz) | Mode  | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|-------|-----------|-------|------------------|--------------|---------------------|----------------------|----------|
| 15MHz   | 18675 | 1857.5    | QPSK  | 1                | 0            | 21.98               | 22.0±1               | /        |
|         |       |           |       | 1                | 37           | 22.04               | 22.0±1               | /        |
|         |       |           |       | 1                | 74           | 22                  | 22.0±1               | /        |
|         |       |           |       | 36               | 0            | 21.09               | 22.0±1               | 1.0      |
|         |       |           |       | 36               | 16           | 21.09               | 22.0±1               | 1.0      |
|         |       |           |       | 36               | 35           | 21.14               | 22.0±1               | 1.0      |
|         |       |           |       | 75               | 0            | 21.14               | 22.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 20.91               | 20.5±1               | 1.0      |
|         |       |           |       | 1                | 37           | 21.02               | 20.5±1               | 1.0      |
|         |       |           |       | 1                | 74           | 20.95               | 20.5±1               | 1.0      |
|         |       |           |       | 36               | 0            | 19.99               | 20.5±1               | 1.0      |
|         |       |           |       | 36               | 16           | 20.1                | 20.5±1               | 1.0      |
|         |       |           |       | 36               | 35           | 20.09               | 20.5±1               | 1.0      |
|         |       |           |       | 75               | 0            | 20.1                | 20.5±1               | 1.0      |
|         | 18900 | 1880      | QPSK  | 1                | 0            | 22.23               | 22.0±1               | /        |
|         |       |           |       | 1                | 37           | 22.33               | 22.0±1               | /        |
|         |       |           |       | 1                | 74           | 22.3                | 22.0±1               | /        |
|         |       |           |       | 36               | 0            | 21.39               | 22.0±1               | 1.0      |
|         |       |           |       | 36               | 16           | 21.45               | 22.0±1               | 1.0      |
|         |       |           |       | 36               | 35           | 21.37               | 22.0±1               | 1.0      |
|         |       |           |       | 75               | 0            | 21.38               | 22.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 21.61               | 21.0±1               | 1.0      |
|         |       |           |       | 1                | 37           | 21.72               | 21.0±1               | 1.0      |
|         |       |           |       | 1                | 74           | 21.68               | 21.0±1               | 1.0      |
|         |       |           |       | 36               | 0            | 20.45               | 21.0±1               | 1.0      |
|         |       |           |       | 36               | 16           | 20.44               | 21.0±1               | 1.0      |
|         |       |           |       | 36               | 35           | 20.37               | 21.0±1               | 1.0      |
|         |       |           |       | 75               | 0            | 20.36               | 21.0±1               | 1.0      |
|         | 19125 | 1902.5    | QPSK  | 1                | 0            | 22.27               | 22.0±1               | /        |
|         |       |           |       | 1                | 37           | 22.3                | 22.0±1               | /        |
| 1       |       |           |       | 74               | 22.22        | 22.0±1              | /                    |          |
| 36      |       |           |       | 0                | 21.36        | 22.0±1              | 1.0                  |          |
| 36      |       |           |       | 16               | 21.36        | 22.0±1              | 1.0                  |          |
| 36      |       |           |       | 35               | 21.25        | 22.0±1              | 1.0                  |          |
| 75      |       |           |       | 0                | 21.29        | 22.0±1              | 1.0                  |          |
| 16QAM   |       |           | 1     | 0                | 21.67        | 21.0±1              | 1.0                  |          |
|         |       |           | 1     | 37               | 21.64        | 21.0±1              | 1.0                  |          |
|         |       |           | 1     | 74               | 21.56        | 21.0±1              | 1.0                  |          |
|         |       |           | 36    | 0                | 20.27        | 21.0±1              | 1.0                  |          |
|         |       |           | 36    | 16               | 20.24        | 21.0±1              | 1.0                  |          |
|         |       |           | 36    | 35               | 20.18        | 21.0±1              | 1.0                  |          |
|         |       |           | 75    | 0                | 20.24        | 21.0±1              | 1.0                  |          |

| BW(MHz) | Ch    | Freq(MHz) | Mode  | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|-------|-----------|-------|------------------|--------------|---------------------|----------------------|----------|
| 20MHz   | 18700 | 1860      | QPSK  | 1                | 0            | 22.06               | 22.0±1               | /        |
|         |       |           |       | 1                | 49           | 22.23               | 22.0±1               | /        |
|         |       |           |       | 1                | 99           | 22.12               | 22.0±1               | /        |
|         |       |           |       | 50               | 0            | 21.03               | 22.0±1               | 1.0      |
|         |       |           |       | 50               | 24           | 21.13               | 22.0±1               | 1.0      |
|         |       |           |       | 50               | 49           | 21.25               | 22.0±1               | 1.0      |
|         |       |           |       | 100              | 0            | 21.19               | 22.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 21.55               | 21.0±1               | 1.0      |
|         |       |           |       | 1                | 49           | 21.75               | 21.0±1               | 1.0      |
|         |       |           |       | 1                | 99           | 21.62               | 21.0±1               | 1.0      |
|         |       |           |       | 50               | 0            | 20.09               | 21.0±1               | 1.0      |
|         |       |           |       | 50               | 24           | 20.17               | 21.0±1               | 1.0      |
|         |       |           |       | 50               | 49           | 20.27               | 21.0±1               | 1.0      |
|         |       |           |       | 100              | 0            | 20.23               | 21.0±1               | 1.0      |
|         | 18900 | 1880      | QPSK  | 1                | 0            | 22.22               | 22.0±1               | /        |
|         |       |           |       | 1                | 49           | 22.56               | 22.0±1               | /        |
|         |       |           |       | 1                | 99           | 22.31               | 22.0±1               | /        |
|         |       |           |       | 50               | 0            | 21.38               | 22.0±1               | 1.0      |
|         |       |           |       | 50               | 24           | 21.38               | 22.0±1               | 1.0      |
|         |       |           |       | 50               | 49           | 21.33               | 22.0±1               | 1.0      |
|         |       |           |       | 100              | 0            | 21.36               | 22.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 21.61               | 21.0±1               | 1.0      |
|         |       |           |       | 1                | 49           | 21.96               | 21.0±1               | 1.0      |
|         |       |           |       | 1                | 99           | 21.69               | 21.0±1               | 1.0      |
|         |       |           |       | 50               | 0            | 20.39               | 21.0±1               | 1.0      |
|         |       |           |       | 50               | 24           | 20.4                | 21.0±1               | 1.0      |
|         |       |           |       | 50               | 49           | 20.33               | 21.0±1               | 1.0      |
|         |       |           |       | 100              | 0            | 20.37               | 21.0±1               | 1.0      |
|         | 19100 | 1900      | QPSK  | 1                | 0            | 22.15               | 22.0±1               | /        |
|         |       |           |       | 1                | 49           | 22.33               | 22.0±1               | /        |
| 1       |       |           |       | 99               | 22.09        | 22.0±1              | /                    |          |
| 50      |       |           |       | 0                | 21.27        | 22.0±1              | 1.0                  |          |
| 50      |       |           |       | 24               | 21.24        | 22.0±1              | 1.0                  |          |
| 50      |       |           |       | 49               | 21.09        | 22.0±1              | 1.0                  |          |
| 100     |       |           |       | 0                | 21.2         | 22.0±1              | 1.0                  |          |
| 16QAM   |       |           | 1     | 0                | 21.56        | 21.0±1              | 1.0                  |          |
|         |       |           | 1     | 49               | 21.75        | 21.0±1              | 1.0                  |          |
|         |       |           | 1     | 99               | 21.47        | 21.0±1              | 1.0                  |          |
|         |       |           | 50    | 0                | 20.25        | 21.0±1              | 1.0                  |          |
|         |       |           | 50    | 24               | 20.25        | 21.0±1              | 1.0                  |          |
|         |       |           | 50    | 49               | 20.08        | 21.0±1              | 1.0                  |          |
|         |       |           | 100   | 0                | 20.19        | 21.0±1              | 1.0                  |          |

**LTE Band 4:**

| BW(MHz) | Ch    | Freq(MHz) | Mode   | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|-------|-----------|--------|------------------|--------------|---------------------|----------------------|----------|
| 1.4MHz  | 19957 | 1710.7    | QPSK   | 1                | 0            | 22.19               | 22.0±1               | /        |
|         |       |           |        | 1                | 2            | 22.36               | 22.0±1               | /        |
|         |       |           |        | 1                | 5            | 22.21               | 22.0±1               | /        |
|         |       |           |        | 3                | 0            | 22.27               | 22.0±1               | /        |
|         |       |           |        | 3                | 1            | 22.26               | 22.0±1               | /        |
|         |       |           |        | 3                | 2            | 22.26               | 22.0±1               | /        |
|         |       |           | 6      | 0                | 21.17        | 22.0±1              | 1.0                  |          |
|         |       |           | 16QAM  | 1                | 0            | 21.3                | 21.0±1               | 1.0      |
|         |       |           |        | 1                | 2            | 21.4                | 21.0±1               | 1.0      |
|         |       |           |        | 1                | 5            | 21.33               | 21.0±1               | 1.0      |
|         |       |           |        | 3                | 0            | 21.25               | 21.0±1               | 1.0      |
|         |       |           |        | 3                | 1            | 21.24               | 21.0±1               | 1.0      |
|         | 3     | 2         |        | 21.28            | 21.0±1       | 1.0                 |                      |          |
|         | 6     | 0         | 20.38  | 21.0±1           | 1.0          |                     |                      |          |
|         | 20175 | 1732.5    | QPSK   | 1                | 0            | 22.14               | 22.0±1               | /        |
|         |       |           |        | 1                | 2            | 22.3                | 22.0±1               | /        |
|         |       |           |        | 1                | 5            | 22.14               | 22.0±1               | /        |
|         |       |           |        | 3                | 0            | 22.23               | 22.0±1               | /        |
|         |       |           |        | 3                | 1            | 22.27               | 22.0±1               | /        |
|         |       |           |        | 3                | 2            | 22.23               | 22.0±1               | /        |
|         |       |           | 6      | 0                | 21.15        | 22.0±1              | 1.0                  |          |
|         |       |           | 16QAM  | 1                | 0            | 21.55               | 21.0±1               | 1.0      |
|         |       |           |        | 1                | 2            | 21.75               | 21.0±1               | 1.0      |
|         |       |           |        | 1                | 5            | 21.6                | 21.0±1               | 1.0      |
|         |       |           |        | 3                | 0            | 21.44               | 21.0±1               | 1.0      |
|         |       |           |        | 3                | 1            | 21.46               | 21.0±1               | 1.0      |
|         | 3     | 2         |        | 21.45            | 21.0±1       | 1.0                 |                      |          |
|         | 6     | 0         | 20.11  | 21.0±1           | 1.0          |                     |                      |          |
|         | 20393 | 1754.3    | QPSK   | 1                | 0            | 21.98               | 22.0±1               | /        |
|         |       |           |        | 1                | 2            | 22.19               | 22.0±1               | /        |
| 1       |       |           |        | 5                | 21.96        | 22.0±1              | /                    |          |
| 3       |       |           |        | 0                | 22.14        | 22.0±1              | /                    |          |
| 3       |       |           |        | 1                | 22.16        | 22.0±1              | /                    |          |
| 3       |       |           |        | 2                | 22.13        | 22.0±1              | /                    |          |
| 6       |       |           | 0      | 21.04            | 22.0±1       | 1.0                 |                      |          |
| 16QAM   |       |           | 1      | 0                | 21           | 21.0±1              | 1.0                  |          |
|         |       |           | 1      | 2                | 21.19        | 21.0±1              | 1.0                  |          |
|         |       |           | 1      | 5                | 20.99        | 21.0±1              | 1.0                  |          |
|         |       |           | 3      | 0                | 21.23        | 21.0±1              | 1.0                  |          |
|         |       |           | 3      | 1                | 21.27        | 21.0±1              | 1.0                  |          |
|         | 3     | 2         | 21.25  | 21.0±1           | 1.0          |                     |                      |          |
| 6       | 0     | 20.19     | 21.0±1 | 1.0              |              |                     |                      |          |

| BW(MHz) | Ch    | Freq(MHz) | Mode  | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|-------|-----------|-------|------------------|--------------|---------------------|----------------------|----------|
| 3MHz    | 19965 | 1711.5    | QPSK  | 1                | 0            | 22.27               | 22.0±1               | /        |
|         |       |           |       | 1                | 8            | 22.26               | 22.0±1               | /        |
|         |       |           |       | 1                | 14           | 22.2                | 22.0±1               | /        |
|         |       |           |       | 6                | 0            | 21.32               | 22.0±1               | 1.0      |
|         |       |           |       | 6                | 4            | 21.35               | 22.0±1               | 1.0      |
|         |       |           |       | 6                | 9            | 21.28               | 22.0±1               | 1.0      |
|         |       |           | 15    | 0                | 21.29        | 22.0±1              | 1.0                  |          |
|         |       |           | 16QAM | 1                | 0            | 21.17               | 21.0±1               | 1.0      |
|         |       |           |       | 1                | 8            | 21.22               | 21.0±1               | 1.0      |
|         |       |           |       | 1                | 14           | 21.17               | 21.0±1               | 1.0      |
|         |       |           |       | 8                | 0            | 20.43               | 21.0±1               | 1.0      |
|         |       |           |       | 8                | 4            | 20.47               | 21.0±1               | 1.0      |
|         |       |           |       | 8                | 9            | 20.43               | 21.0±1               | 1.0      |
|         |       |           | 15    | 0                | 20.36        | 21.0±1              | 1.0                  |          |
|         | 20175 | 1732.5    | QPSK  | 1                | 0            | 22.2                | 22.0±1               | /        |
|         |       |           |       | 1                | 8            | 22.21               | 22.0±1               | /        |
|         |       |           |       | 1                | 14           | 22.24               | 22.0±1               | /        |
|         |       |           |       | 6                | 0            | 21.22               | 22.0±1               | 1.0      |
|         |       |           |       | 6                | 4            | 21.29               | 22.0±1               | 1.0      |
|         |       |           |       | 6                | 9            | 21.22               | 22.0±1               | 1.0      |
|         |       |           | 15    | 0                | 21.2         | 22.0±1              | 1.0                  |          |
|         |       |           | 16QAM | 1                | 0            | 21.59               | 21.0±1               | 1.0      |
|         |       |           |       | 1                | 8            | 21.62               | 21.0±1               | 1.0      |
|         |       |           |       | 1                | 14           | 21.57               | 21.0±1               | 1.0      |
|         |       |           |       | 6                | 0            | 20.42               | 21.0±1               | 1.0      |
|         |       |           |       | 6                | 4            | 20.42               | 21.0±1               | 1.0      |
|         |       |           |       | 6                | 9            | 20.3                | 21.0±1               | 1.0      |
|         |       |           | 15    | 0                | 20.27        | 21.0±1              | 1.0                  |          |
|         | 20385 | 1753.5    | QPSK  | 1                | 0            | 22.09               | 22.0±1               | /        |
|         |       |           |       | 1                | 8            | 22.09               | 22.0±1               | /        |
| 1       |       |           |       | 14               | 21.99        | 22.0±1              | /                    |          |
| 6       |       |           |       | 0                | 21.11        | 22.0±1              | 1.0                  |          |
| 6       |       |           |       | 4                | 21.13        | 22.0±1              | 1.0                  |          |
| 6       |       |           |       | 9                | 21.07        | 22.0±1              | 1.0                  |          |
| 15      |       |           | 0     | 21.11            | 22.0±1       | 1.0                 |                      |          |
| 16QAM   |       |           | 1     | 0                | 21.11        | 21.0±1              | 1.0                  |          |
|         |       |           | 1     | 8                | 21.11        | 21.0±1              | 1.0                  |          |
|         |       |           | 1     | 14               | 21.01        | 21.0±1              | 1.0                  |          |
|         |       |           | 8     | 0                | 20.15        | 21.0±1              | 1.0                  |          |
|         |       |           | 8     | 4                | 20.19        | 21.0±1              | 1.0                  |          |
|         |       |           | 8     | 9                | 20.1         | 21.0±1              | 1.0                  |          |
| 15      |       |           | 0     | 20.07            | 21.0±1       | 1.0                 |                      |          |

| BW(MHz) | Ch     | Freq(MHz) | Mode  | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|--------|-----------|-------|------------------|--------------|---------------------|----------------------|----------|
| 5MHz    | 19975  | 1712.5    | QPSK  | 1                | 0            | 22.1                | 22.0±1               | /        |
|         |        |           |       | 1                | 49           | 22.29               | 22.0±1               | /        |
|         |        |           |       | 1                | 99           | 22.17               | 22.0±1               | /        |
|         |        |           |       | 12               | 0            | 21.26               | 22.0±1               | 1.0      |
|         |        |           |       | 12               | 24           | 21.32               | 22.0±1               | 1.0      |
|         |        |           |       | 12               | 49           | 21.25               | 22.0±1               | 1.0      |
|         |        |           |       | 25               | 0            | 21.26               | 22.0±1               | 1.0      |
|         |        |           | 16QAM | 1                | 0            | 21.33               | 21.0±1               | 1.0      |
|         |        |           |       | 1                | 49           | 21.53               | 21.0±1               | 1.0      |
|         |        |           |       | 1                | 99           | 21.37               | 21.0±1               | 1.0      |
|         |        |           |       | 12               | 0            | 20.32               | 21.0±1               | 1.0      |
|         |        |           |       | 12               | 24           | 20.4                | 21.0±1               | 1.0      |
|         |        |           |       | 12               | 49           | 20.39               | 21.0±1               | 1.0      |
|         |        |           |       | 25               | 0            | 20.3                | 21.0±1               | 1.0      |
|         | 20175  | 1732.5    | QPSK  | 1                | 0            | 22.09               | 22.0±1               | /        |
|         |        |           |       | 1                | 49           | 22.27               | 22.0±1               | /        |
|         |        |           |       | 1                | 99           | 22.06               | 22.0±1               | /        |
|         |        |           |       | 12               | 0            | 21.15               | 22.0±1               | 1.0      |
|         |        |           |       | 12               | 24           | 21.24               | 22.0±1               | 1.0      |
|         |        |           |       | 12               | 49           | 21.22               | 22.0±1               | 1.0      |
|         |        |           |       | 25               | 0            | 21.17               | 22.0±1               | 1.0      |
|         |        |           | 16QAM | 1                | 0            | 21.62               | 21.0±1               | 1.0      |
|         |        |           |       | 1                | 49           | 21.79               | 21.0±1               | 1.0      |
|         |        |           |       | 1                | 99           | 21.61               | 21.0±1               | 1.0      |
|         |        |           |       | 12               | 0            | 20.26               | 21.0±1               | 1.0      |
|         |        |           |       | 12               | 24           | 20.43               | 21.0±1               | 1.0      |
|         |        |           |       | 12               | 49           | 20.33               | 21.0±1               | 1.0      |
| 25      |        |           |       | 0                | 20.3         | 21.0±1              | 1.0                  |          |
| 20375   | 1752.5 | QPSK      | 1     | 0                | 21.92        | 21.5±1              | /                    |          |
|         |        |           | 1     | 49               | 22.03        | 21.5±1              | /                    |          |
|         |        |           | 1     | 99               | 21.9         | 21.5±1              | /                    |          |
|         |        |           | 12    | 0                | 21.05        | 21.5±1              | 1.0                  |          |
|         |        |           | 12    | 24               | 21.08        | 21.5±1              | 1.0                  |          |
|         |        |           | 12    | 49               | 20.96        | 21.5±1              | 1.0                  |          |
|         |        |           | 25    | 0                | 20.98        | 21.5±1              | 1.0                  |          |
|         |        | 16QAM     | 1     | 0                | 21.03        | 21.0±1              | 1.0                  |          |
|         |        |           | 1     | 49               | 21.17        | 21.0±1              | 1.0                  |          |
|         |        |           | 1     | 99               | 21.02        | 21.0±1              | 1.0                  |          |
|         |        |           | 12    | 0                | 20.16        | 21.0±1              | 1.0                  |          |
|         |        |           | 12    | 24               | 20.16        | 21.0±1              | 1.0                  |          |
|         |        |           | 12    | 49               | 20.03        | 21.0±1              | 1.0                  |          |
|         |        |           | 25    | 0                | 20.05        | 21.0±1              | 1.0                  |          |



| BW(MHz) | Ch    | Freq(MHz) | Mode   | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|-------|-----------|--------|------------------|--------------|---------------------|----------------------|----------|
| 10MHz   | 20000 | 1715      | QPSK   | 1                | 0            | 22.11               | 22.0±1               | /        |
|         |       |           |        | 1                | 49           | 22.35               | 22.0±1               | /        |
|         |       |           |        | 1                | 99           | 22.18               | 22.0±1               | /        |
|         |       |           |        | 25               | 0            | 21.25               | 22.0±1               | 1.0      |
|         |       |           |        | 25               | 24           | 21.26               | 22.0±1               | 1.0      |
|         |       |           |        | 25               | 49           | 21.3                | 22.0±1               | 1.0      |
|         |       |           | 16QAM  | 50               | 0            | 21.21               | 22.0±1               | 1.0      |
|         |       |           |        | 1                | 0            | 21.05               | 21.0±1               | 1.0      |
|         |       |           |        | 1                | 49           | 21.3                | 21.0±1               | 1.0      |
|         |       |           |        | 1                | 99           | 21.17               | 21.0±1               | 1.0      |
|         |       |           |        | 25               | 0            | 20.27               | 21.0±1               | 1.0      |
|         |       |           |        | 25               | 24           | 20.27               | 21.0±1               | 1.0      |
|         | 20175 | 1732.5    | QPSK   | 25               | 49           | 20.33               | 21.0±1               | 1.0      |
|         |       |           |        | 50               | 0            | 20.27               | 21.0±1               | 1.0      |
|         |       |           |        | 1                | 0            | 22.1                | 22.0±1               | /        |
|         |       |           |        | 1                | 49           | 22.36               | 22.0±1               | /        |
|         |       |           |        | 1                | 99           | 22.07               | 22.0±1               | /        |
|         |       |           |        | 25               | 0            | 21.12               | 22.0±1               | 1.0      |
|         |       |           | 16QAM  | 25               | 24           | 21.18               | 22.0±1               | 1.0      |
|         |       |           |        | 25               | 49           | 21.25               | 22.0±1               | 1.0      |
|         |       |           |        | 25               | 49           | 21.25               | 22.0±1               | 1.0      |
|         |       |           |        | 50               | 0            | 21.19               | 22.0±1               | 1.0      |
|         |       |           |        | 1                | 0            | 21.51               | 21.0±1               | 1.0      |
|         |       |           |        | 1                | 49           | 21.67               | 21.0±1               | 1.0      |
|         | 20350 | 1750      | QPSK   | 1                | 99           | 21.47               | 21.0±1               | 1.0      |
|         |       |           |        | 25               | 0            | 20.25               | 21.0±1               | 1.0      |
|         |       |           |        | 25               | 24           | 20.27               | 21.0±1               | 1.0      |
| 25      |       |           |        | 49               | 20.31        | 21.0±1              | 1.0                  |          |
| 50      |       |           |        | 0                | 20.24        | 21.0±1              | 1.0                  |          |
| 1       |       |           |        | 0                | 22.06        | 22.0±1              | /                    |          |
| 16QAM   |       |           | 1      | 49               | 22.2         | 22.0±1              | /                    |          |
|         |       |           | 1      | 99               | 21.95        | 22.0±1              | /                    |          |
|         |       |           | 25     | 0                | 21.11        | 22.0±1              | 1.0                  |          |
|         |       |           | 25     | 24               | 21.08        | 22.0±1              | 1.0                  |          |
|         |       |           | 25     | 49               | 21.03        | 22.0±1              | 1.0                  |          |
|         |       |           | 50     | 0                | 21.05        | 22.0±1              | 1.0                  |          |
| 1       | 0     | 21.11     | 21.0±1 | 1.0              |              |                     |                      |          |
| 1       | 49    | 21.23     | 21.0±1 | 1.0              |              |                     |                      |          |
| 1       | 99    | 20.99     | 21.0±1 | 1.0              |              |                     |                      |          |
| 25      | 0     | 20.26     | 21.0±1 | 1.0              |              |                     |                      |          |
| 25      | 24    | 20.19     | 21.0±1 | 1.0              |              |                     |                      |          |
| 25      | 49    | 20.18     | 21.0±1 | 1.0              |              |                     |                      |          |
| 50      | 0     | 20.15     | 21.0±1 | 1.0              |              |                     |                      |          |

| BW(MHz) | Ch    | Freq(MHz) | Mode  | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|-------|-----------|-------|------------------|--------------|---------------------|----------------------|----------|
| 15MHz   | 20025 | 1717.5    | QPSK  | 1                | 0            | 22.06               | 22.0±1               | /        |
|         |       |           |       | 1                | 49           | 22.16               | 22.0±1               | /        |
|         |       |           |       | 1                | 99           | 22.1                | 22.0±1               | /        |
|         |       |           |       | 36               | 0            | 21.21               | 22.0±1               | 1.0      |
|         |       |           |       | 36               | 24           | 21.26               | 22.0±1               | 1.0      |
|         |       |           |       | 36               | 49           | 21.19               | 22.0±1               | 1.0      |
|         |       |           |       | 75               | 0            | 21.21               | 22.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 20.95               | 21.0±1               | 1.0      |
|         |       |           |       | 1                | 49           | 21.12               | 21.0±1               | 1.0      |
|         |       |           |       | 1                | 99           | 21.1                | 21.0±1               | 1.0      |
|         |       |           |       | 36               | 0            | 20.17               | 21.0±1               | 1.0      |
|         |       |           |       | 36               | 24           | 20.2                | 21.0±1               | 1.0      |
|         |       |           |       | 36               | 49           | 20.12               | 21.0±1               | 1.0      |
|         |       |           |       | 75               | 0            | 20.12               | 21.0±1               | 1.0      |
|         | 20175 | 1732.5    | QPSK  | 1                | 0            | 21.97               | 22.0±1               | /        |
|         |       |           |       | 1                | 49           | 22.12               | 22.0±1               | /        |
|         |       |           |       | 1                | 99           | 22.04               | 22.0±1               | /        |
|         |       |           |       | 36               | 0            | 21.03               | 22.0±1               | 1.0      |
|         |       |           |       | 36               | 24           | 21.14               | 22.0±1               | 1.0      |
|         |       |           |       | 36               | 49           | 21.15               | 22.0±1               | 1.0      |
|         |       |           |       | 75               | 0            | 21.11               | 22.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 21.39               | 21.0±1               | 1.0      |
|         |       |           |       | 1                | 49           | 21.52               | 21.0±1               | 1.0      |
|         |       |           |       | 1                | 99           | 21.4                | 21.0±1               | 1.0      |
|         |       |           |       | 36               | 0            | 20.12               | 21.0±1               | 1.0      |
|         |       |           |       | 36               | 24           | 20.21               | 21.0±1               | 1.0      |
|         |       |           |       | 36               | 49           | 20.19               | 21.0±1               | 1.0      |
|         |       |           |       | 75               | 0            | 20.11               | 21.0±1               | 1.0      |
|         | 20325 | 1747.5    | QPSK  | 1                | 0            | 21.99               | 22.0±1               | /        |
|         |       |           |       | 1                | 49           | 21.98               | 22.0±1               | /        |
| 1       |       |           |       | 99               | 21.8         | 22.0±1              | /                    |          |
| 36      |       |           |       | 0                | 21.02        | 22.0±1              | 1.0                  |          |
| 36      |       |           |       | 24               | 21.04        | 22.0±1              | 1.0                  |          |
| 36      |       |           |       | 49               | 20.96        | 22.0±1              | 1.0                  |          |
| 75      |       |           |       | 0                | 21.02        | 22.0±1              | 1.0                  |          |
| 16QAM   |       |           | 1     | 0                | 21.47        | 20.5±1              | 1.0                  |          |
|         |       |           | 1     | 49               | 21.45        | 20.5±1              | 1.0                  |          |
|         |       |           | 1     | 99               | 21.29        | 20.5±1              | 1.0                  |          |
|         |       |           | 36    | 0                | 20.02        | 20.5±1              | 1.0                  |          |
|         |       |           | 36    | 24               | 20.06        | 20.5±1              | 1.0                  |          |
|         |       |           | 36    | 49               | 19.92        | 20.5±1              | 1.0                  |          |
|         |       |           | 75    | 0                | 20           | 20.5±1              | 1.0                  |          |

| BW(MHz) | Ch    | Freq(MHz) | Mode   | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|-------|-----------|--------|------------------|--------------|---------------------|----------------------|----------|
| 20MHz   | 20050 | 1720      | QPSK   | 1                | 0            | 21.97               | 21.5±1               | /        |
|         |       |           |        | 1                | 49           | 22.17               | 21.5±1               | /        |
|         |       |           |        | 1                | 99           | 22.05               | 21.5±1               | /        |
|         |       |           |        | 50               | 0            | 21.1                | 21.5±1               | 1.0      |
|         |       |           |        | 50               | 24           | 21.06               | 21.5±1               | 1.0      |
|         |       |           |        | 50               | 49           | 21.1                | 21.5±1               | 1.0      |
|         |       |           | 100    | 0                | 21.09        | 21.5±1              | 1.0                  |          |
|         |       |           | 16QAM  | 1                | 0            | 21.41               | 21.0±1               | 1.0      |
|         |       |           |        | 1                | 49           | 21.86               | 21.0±1               | 1.0      |
|         |       |           |        | 1                | 99           | 21.55               | 21.0±1               | 1.0      |
|         |       |           |        | 50               | 0            | 20.12               | 21.0±1               | 1.0      |
|         |       |           |        | 50               | 24           | 20.13               | 21.0±1               | 1.0      |
|         | 50    | 49        |        | 20.12            | 21.0±1       | 1.0                 |                      |          |
|         | 100   | 0         | 20.18  | 21.0±1           | 1.0          |                     |                      |          |
|         | 20175 | 1732.5    | QPSK   | 1                | 0            | 21.99               | 21.5±1               | /        |
|         |       |           |        | 1                | 49           | 22.37               | 21.5±1               | /        |
|         |       |           |        | 1                | 99           | 21.84               | 21.5±1               | /        |
|         |       |           |        | 50               | 0            | 20.94               | 21.5±1               | 1.0      |
|         |       |           |        | 50               | 24           | 21.05               | 21.5±1               | 1.0      |
|         |       |           |        | 50               | 49           | 21.04               | 21.5±1               | 1.0      |
|         |       |           | 100    | 0                | 20.98        | 21.5±1              | 1.0                  |          |
|         |       |           | 16QAM  | 1                | 0            | 21.4                | 21.0±1               | 1.0      |
|         |       |           |        | 1                | 49           | 21.69               | 21.0±1               | 1.0      |
|         |       |           |        | 1                | 99           | 21.37               | 21.0±1               | 1.0      |
|         |       |           |        | 50               | 0            | 20.04               | 21.0±1               | 1.0      |
|         |       |           |        | 50               | 24           | 20.07               | 21.0±1               | 1.0      |
|         | 50    | 49        |        | 20.1             | 21.0±1       | 1.0                 |                      |          |
|         | 100   | 0         | 20     | 21.0±1           | 1.0          |                     |                      |          |
|         | 20300 | 1745      | QPSK   | 1                | 0            | 21.8                | 21.0±1               | /        |
|         |       |           |        | 1                | 49           | 21.98               | 21.0±1               | /        |
| 1       |       |           |        | 99               | 21.65        | 21.0±1              | /                    |          |
| 50      |       |           |        | 0                | 20.96        | 21.0±1              | 1.0                  |          |
| 50      |       |           |        | 24               | 20.92        | 21.0±1              | 1.0                  |          |
| 50      |       |           |        | 49               | 20.79        | 21.0±1              | 1.0                  |          |
| 100     |       |           | 0      | 20.84            | 21.0±1       | 1.0                 |                      |          |
| 16QAM   |       |           | 1      | 0                | 21.28        | 20.5±1              | 1.0                  |          |
|         |       |           | 1      | 49               | 21.48        | 20.5±1              | 1.0                  |          |
|         |       |           | 1      | 99               | 21.08        | 20.5±1              | 1.0                  |          |
|         |       |           | 50     | 0                | 19.99        | 20.5±1              | 1.0                  |          |
|         |       |           | 50     | 24               | 19.92        | 20.5±1              | 1.0                  |          |
|         | 50    | 49        | 19.84  | 20.5±1           | 1.0          |                     |                      |          |
| 100     | 0     | 19.92     | 20.5±1 | 1.0              |              |                     |                      |          |

**LTE Band 5:**

| BW(MHz) | Ch    | Freq(MHz) | Mode  | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|-------|-----------|-------|------------------|--------------|---------------------|----------------------|----------|
| 1.4MHz  | 20407 | 824.7     | QPSK  | 1                | 0            | 22.74               | 22.0±1               | /        |
|         |       |           |       | 1                | 2            | 22.85               | 22.0±1               | /        |
|         |       |           |       | 1                | 5            | 22.73               | 22.0±1               | /        |
|         |       |           |       | 3                | 0            | 22.83               | 22.0±1               | /        |
|         |       |           |       | 3                | 1            | 22.87               | 22.0±1               | /        |
|         |       |           |       | 3                | 2            | 22.82               | 22.0±1               | /        |
|         |       |           | 16QAM | 6                | 0            | 21.8                | 22.0±1               | 1.0      |
|         |       |           |       | 1                | 0            | 21.83               | 21.5±1               | 1.0      |
|         |       |           |       | 1                | 2            | 22                  | 21.5±1               | 1.0      |
|         |       |           |       | 1                | 5            | 21.85               | 21.5±1               | 1.0      |
|         |       |           |       | 3                | 0            | 21.9                | 21.5±1               | 1.0      |
|         |       |           |       | 3                | 1            | 21.87               | 21.5±1               | 1.0      |
|         | 20525 | 836.5     | QPSK  | 3                | 2            | 21.95               | 21.5±1               | 1.0      |
|         |       |           |       | 6                | 0            | 20.93               | 21.5±1               | 1.0      |
|         |       |           |       | 1                | 0            | 22.65               | 22.0±1               | /        |
|         |       |           |       | 1                | 2            | 22.75               | 22.0±1               | /        |
|         |       |           |       | 1                | 5            | 22.64               | 22.0±1               | /        |
|         |       |           |       | 3                | 0            | 22.74               | 22.0±1               | /        |
|         |       |           | 16QAM | 3                | 1            | 22.72               | 22.0±1               | /        |
|         |       |           |       | 3                | 2            | 22.75               | 22.0±1               | /        |
|         |       |           |       | 6                | 0            | 21.67               | 22.0±1               | 1.0      |
|         |       |           |       | 1                | 0            | 22.01               | 21.5±1               | 1.0      |
|         |       |           |       | 1                | 2            | 22.18               | 21.5±1               | 1.0      |
|         |       |           |       | 1                | 5            | 22                  | 21.5±1               | 1.0      |
|         | 20634 | 848.3     | QPSK  | 3                | 0            | 21.91               | 21.5±1               | 1.0      |
|         |       |           |       | 3                | 1            | 21.97               | 21.5±1               | 1.0      |
|         |       |           |       | 3                | 2            | 21.94               | 21.5±1               | 1.0      |
|         |       |           |       | 6                | 0            | 20.6                | 21.5±1               | 1.0      |
|         |       |           |       | 1                | 0            | 22.61               | 22.0±1               | /        |
|         |       |           |       | 1                | 2            | 22.83               | 22.0±1               | /        |
| 16QAM   |       |           | 1     | 5                | 22.64        | 22.0±1              | /                    |          |
|         |       |           | 3     | 0                | 22.79        | 22.0±1              | /                    |          |
|         |       |           | 3     | 1                | 22.83        | 22.0±1              | /                    |          |
|         |       |           | 3     | 2                | 22.74        | 22.0±1              | /                    |          |
|         |       |           | 6     | 0                | 21.71        | 22.0±1              | 1.0                  |          |
|         |       |           | 1     | 0                | 21.67        | 21.0±1              | 1.0                  |          |
| 16QAM   | 1     | 2         | 21.85 | 21.0±1           | 1.0          |                     |                      |          |
|         | 1     | 5         | 21.74 | 21.0±1           | 1.0          |                     |                      |          |
|         | 3     | 0         | 21.92 | 21.0±1           | 1.0          |                     |                      |          |
|         | 3     | 1         | 21.95 | 21.0±1           | 1.0          |                     |                      |          |
|         | 3     | 2         | 21.99 | 21.0±1           | 1.0          |                     |                      |          |
|         | 6     | 0         | 20.92 | 21.0±1           | 1.0          |                     |                      |          |

| BW(MHz) | Ch    | Freq(MHz) | Mode  | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|-------|-----------|-------|------------------|--------------|---------------------|----------------------|----------|
| 3MHz    | 20415 | 825.5     | QPSK  | 1                | 0            | 22.76               | 22.0±1               | /        |
|         |       |           |       | 1                | 8            | 22.7                | 22.0±1               | /        |
|         |       |           |       | 1                | 14           | 22.76               | 22.0±1               | /        |
|         |       |           |       | 6                | 0            | 21.81               | 22.0±1               | 1.0      |
|         |       |           |       | 6                | 4            | 21.84               | 22.0±1               | 1.0      |
|         |       |           |       | 6                | 9            | 21.8                | 22.0±1               | 1.0      |
|         |       |           |       | 15               | 0            | 21.78               | 22.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 21.75               | 21.0±1               | 1.0      |
|         |       |           |       | 1                | 8            | 21.74               | 21.0±1               | 1.0      |
|         |       |           |       | 1                | 14           | 21.71               | 21.0±1               | 1.0      |
|         |       |           |       | 8                | 0            | 20.95               | 21.0±1               | 1.0      |
|         |       |           |       | 8                | 4            | 20.93               | 21.0±1               | 1.0      |
|         |       |           |       | 8                | 9            | 20.93               | 21.0±1               | 1.0      |
|         |       |           |       | 15               | 0            | 20.84               | 21.0±1               | 1.0      |
|         | 20525 | 836.5     | QPSK  | 1                | 0            | 22.7                | 22.0±1               | /        |
|         |       |           |       | 1                | 8            | 22.67               | 22.0±1               | /        |
|         |       |           |       | 1                | 14           | 22.64               | 22.0±1               | /        |
|         |       |           |       | 6                | 0            | 21.72               | 22.0±1               | 1.0      |
|         |       |           |       | 6                | 4            | 21.75               | 22.0±1               | 1.0      |
|         |       |           |       | 6                | 9            | 21.7                | 22.0±1               | 1.0      |
|         |       |           |       | 15               | 0            | 21.7                | 22.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 22.05               | 21.5±1               | 1.0      |
|         |       |           |       | 1                | 8            | 22.08               | 21.5±1               | 1.0      |
|         |       |           |       | 1                | 14           | 22.08               | 21.5±1               | 1.0      |
|         |       |           |       | 6                | 0            | 20.84               | 21.5±1               | 1.0      |
|         |       |           |       | 6                | 4            | 20.85               | 21.5±1               | 1.0      |
|         |       |           |       | 6                | 9            | 20.83               | 21.5±1               | 1.0      |
|         |       |           |       | 15               | 0            | 20.77               | 21.5±1               | 1.0      |
|         | 20635 | 847.5     | QPSK  | 1                | 0            | 22.69               | 22.0±1               | /        |
|         |       |           |       | 1                | 8            | 22.71               | 22.0±1               | /        |
| 1       |       |           |       | 14               | 22.73        | 22.0±1              | /                    |          |
| 6       |       |           |       | 0                | 21.72        | 22.0±1              | 1.0                  |          |
| 6       |       |           |       | 4                | 21.8         | 22.0±1              | 1.0                  |          |
| 6       |       |           |       | 9                | 21.74        | 22.0±1              | 1.0                  |          |
| 15      |       |           |       | 0                | 21.77        | 22.0±1              | 1.0                  |          |
| 16QAM   |       |           | 1     | 0                | 21.78        | 21.0±1              | 1.0                  |          |
|         |       |           | 1     | 8                | 21.73        | 21.0±1              | 1.0                  |          |
|         |       |           | 1     | 14               | 21.74        | 21.0±1              | 1.0                  |          |
|         |       |           | 8     | 0                | 20.79        | 21.0±1              | 1.0                  |          |
|         |       |           | 8     | 4                | 20.86        | 21.0±1              | 1.0                  |          |
|         |       |           | 8     | 9                | 20.75        | 21.0±1              | 1.0                  |          |
|         |       |           | 15    | 0                | 20.75        | 21.0±1              | 1.0                  |          |

| BW(MHz) | Ch    | Freq(MHz) | Mode  | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|-------|-----------|-------|------------------|--------------|---------------------|----------------------|----------|
| 5MHz    | 20425 | 826.5     | QPSK  | 1                | 0            | 22.69               | 22.0±1               | /        |
|         |       |           |       | 1                | 49           | 22.87               | 22.0±1               | /        |
|         |       |           |       | 1                | 99           | 22.67               | 22.0±1               | /        |
|         |       |           |       | 12               | 0            | 21.72               | 22.0±1               | 1.0      |
|         |       |           |       | 12               | 24           | 21.85               | 22.0±1               | 1.0      |
|         |       |           |       | 12               | 49           | 21.86               | 22.0±1               | 1.0      |
|         |       |           |       | 25               | 0            | 21.77               | 22.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 21.9                | 21.0±1               | 1.0      |
|         |       |           |       | 1                | 49           | 21.98               | 21.0±1               | 1.0      |
|         |       |           |       | 1                | 99           | 21.84               | 21.0±1               | 1.0      |
|         |       |           |       | 12               | 0            | 20.76               | 21.0±1               | 1.0      |
|         |       |           |       | 12               | 24           | 20.93               | 21.0±1               | 1.0      |
|         |       |           |       | 12               | 49           | 20.9                | 21.0±1               | 1.0      |
|         |       |           |       | 25               | 0            | 20.82               | 21.0±1               | 1.0      |
|         | 20525 | 836.5     | QPSK  | 1                | 0            | 22.7                | 22.0±1               | /        |
|         |       |           |       | 1                | 49           | 22.72               | 22.0±1               | /        |
|         |       |           |       | 1                | 99           | 22.59               | 22.0±1               | /        |
|         |       |           |       | 12               | 0            | 21.79               | 22.0±1               | 1.0      |
|         |       |           |       | 12               | 24           | 21.74               | 22.0±1               | 1.0      |
|         |       |           |       | 12               | 49           | 21.69               | 22.0±1               | 1.0      |
|         |       |           |       | 25               | 0            | 21.75               | 22.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 22.16               | 21.5±1               | 1.0      |
|         |       |           |       | 1                | 49           | 22.26               | 21.5±1               | 1.0      |
|         |       |           |       | 1                | 99           | 22.1                | 21.5±1               | 1.0      |
|         |       |           |       | 12               | 0            | 20.89               | 21.5±1               | 1.0      |
|         |       |           |       | 12               | 24           | 20.89               | 21.5±1               | 1.0      |
|         |       |           |       | 12               | 49           | 20.85               | 21.5±1               | 1.0      |
|         |       |           |       | 25               | 0            | 20.82               | 21.5±1               | 1.0      |
|         | 20625 | 846.5     | QPSK  | 1                | 0            | 22.59               | 22.0±1               | /        |
|         |       |           |       | 1                | 49           | 22.78               | 22.0±1               | /        |
| 1       |       |           |       | 99               | 22.65        | 22.0±1              | /                    |          |
| 12      |       |           |       | 0                | 21.72        | 22.0±1              | 1.0                  |          |
| 12      |       |           |       | 24               | 21.75        | 22.0±1              | 1.0                  |          |
| 12      |       |           |       | 49               | 21.72        | 22.0±1              | 1.0                  |          |
| 25      |       |           |       | 0                | 21.71        | 22.0±1              | 1.0                  |          |
| 16QAM   |       |           | 1     | 0                | 21.67        | 21.0±1              | 1.0                  |          |
|         |       |           | 1     | 49               | 21.85        | 21.0±1              | 1.0                  |          |
|         |       |           | 1     | 99               | 21.77        | 21.0±1              | 1.0                  |          |
|         |       |           | 12    | 0                | 20.79        | 21.0±1              | 1.0                  |          |
|         |       |           | 12    | 24               | 20.8         | 21.0±1              | 1.0                  |          |
|         |       |           | 12    | 49               | 20.74        | 21.0±1              | 1.0                  |          |
|         |       |           | 25    | 0                | 20.7         | 21.0±1              | 1.0                  |          |

| BW(MHz) | Ch    | Freq(MHz) | Mode  | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|-------|-----------|-------|------------------|--------------|---------------------|----------------------|----------|
| 10MHz   | 20450 | 829       | QPSK  | 1                | 0            | 22.76               | 22.0±1               | /        |
|         |       |           |       | 1                | 49           | 22.95               | 22.0±1               | /        |
|         |       |           |       | 1                | 99           | 22.71               | 22.0±1               | /        |
|         |       |           |       | 25               | 0            | 21.71               | 22.0±1               | 1.0      |
|         |       |           |       | 25               | 24           | 21.86               | 22.0±1               | 1.0      |
|         |       |           |       | 25               | 49           | 21.81               | 22.0±1               | 1.0      |
|         |       |           |       | 50               | 0            | 21.78               | 22.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 21.76               | 21.0±1               | 1.0      |
|         |       |           |       | 1                | 49           | 21.85               | 21.0±1               | 1.0      |
|         |       |           |       | 1                | 99           | 21.65               | 21.0±1               | 1.0      |
|         |       |           |       | 25               | 0            | 20.78               | 21.0±1               | 1.0      |
|         |       |           |       | 25               | 24           | 20.89               | 21.0±1               | 1.0      |
|         |       |           |       | 25               | 49           | 20.84               | 21.0±1               | 1.0      |
|         |       |           |       | 50               | 0            | 20.81               | 21.0±1               | 1.0      |
|         | 20525 | 836.5     | QPSK  | 1                | 0            | 22.74               | 22.0±1               | /        |
|         |       |           |       | 1                | 49           | 22.86               | 22.0±1               | /        |
|         |       |           |       | 1                | 99           | 22.69               | 22.0±1               | /        |
|         |       |           |       | 25               | 0            | 21.91               | 22.0±1               | 1.0      |
|         |       |           |       | 25               | 24           | 21.83               | 22.0±1               | 1.0      |
|         |       |           |       | 25               | 49           | 21.74               | 22.0±1               | 1.0      |
|         |       |           |       | 50               | 0            | 21.82               | 22.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 22.13               | 21.5±1               | 1.0      |
|         |       |           |       | 1                | 49           | 22.24               | 21.5±1               | 1.0      |
|         |       |           |       | 1                | 99           | 22.05               | 21.5±1               | 1.0      |
|         |       |           |       | 25               | 0            | 20.91               | 21.5±1               | 1.0      |
|         |       |           |       | 25               | 24           | 20.86               | 21.5±1               | 1.0      |
|         |       |           |       | 25               | 49           | 20.8                | 21.5±1               | 1.0      |
|         |       |           |       | 50               | 0            | 20.89               | 21.5±1               | 1.0      |
|         | 20600 | 844       | QPSK  | 1                | 0            | 22.64               | 22.0±1               | /        |
|         |       |           |       | 1                | 49           | 22.82               | 22.0±1               | /        |
| 1       |       |           |       | 99               | 22.72        | 22.0±1              | /                    |          |
| 25      |       |           |       | 0                | 21.75        | 22.0±1              | 1.0                  |          |
| 25      |       |           |       | 24               | 21.75        | 22.0±1              | 1.0                  |          |
| 25      |       |           |       | 49               | 21.71        | 22.0±1              | 1.0                  |          |
| 50      |       |           |       | 0                | 21.73        | 22.0±1              | 1.0                  |          |
| 16QAM   |       |           | 1     | 0                | 21.65        | 21.0±1              | 1.0                  |          |
|         |       |           | 1     | 49               | 21.85        | 21.0±1              | 1.0                  |          |
|         |       |           | 1     | 99               | 21.75        | 21.0±1              | 1.0                  |          |
|         |       |           | 25    | 0                | 20.89        | 21.0±1              | 1.0                  |          |
|         |       |           | 25    | 24               | 20.89        | 21.0±1              | 1.0                  |          |
|         |       |           | 25    | 49               | 20.81        | 21.0±1              | 1.0                  |          |
|         |       |           | 50    | 0                | 20.8         | 21.0±1              | 1.0                  |          |

**LTE Band 7:**

| BW(MHz) | Ch     | Freq(MHz) | Mode  | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|--------|-----------|-------|------------------|--------------|---------------------|----------------------|----------|
| 5MHz    | 20775  | 2502.5    | QPSK  | 1                | 0            | 21.57               | 21.0±1               | /        |
|         |        |           |       | 1                | 49           | 21.67               | 21.0±1               | /        |
|         |        |           |       | 1                | 99           | 21.56               | 21.0±1               | /        |
|         |        |           |       | 12               | 0            | 20.59               | 20.0±1               | 1.0      |
|         |        |           |       | 12               | 24           | 20.65               | 20.0±1               | 1.0      |
|         |        |           |       | 12               | 49           | 20.67               | 20.0±1               | 1.0      |
|         |        |           |       | 25               | 0            | 20.6                | 20.0±1               | 1.0      |
|         |        |           | 16QAM | 1                | 0            | 21                  | 20.5±1               | 1.0      |
|         |        |           |       | 1                | 49           | 21.13               | 20.5±1               | 1.0      |
|         |        |           |       | 1                | 99           | 21.03               | 20.5±1               | 1.0      |
|         |        |           |       | 12               | 0            | 19.78               | 20.5±1               | 1.0      |
|         |        |           |       | 12               | 24           | 19.92               | 20.5±1               | 1.0      |
|         |        |           |       | 12               | 49           | 19.88               | 20.5±1               | 1.0      |
|         |        |           |       | 25               | 0            | 19.76               | 20.5±1               | 1.0      |
|         | 21100  | 2535      | QPSK  | 1                | 0            | 21.5                | 21.0±1               | /        |
|         |        |           |       | 1                | 49           | 21.57               | 21.0±1               | /        |
|         |        |           |       | 1                | 99           | 21.49               | 21.0±1               | /        |
|         |        |           |       | 12               | 0            | 20.57               | 21.0±1               | 1.0      |
|         |        |           |       | 12               | 24           | 20.63               | 21.0±1               | 1.0      |
|         |        |           |       | 12               | 49           | 20.59               | 21.0±1               | 1.0      |
|         |        |           |       | 25               | 0            | 20.59               | 21.0±1               | 1.0      |
|         |        |           | 16QAM | 1                | 0            | 20.63               | 20.0±1               | 1.0      |
|         |        |           |       | 1                | 49           | 20.71               | 20.0±1               | 1.0      |
|         |        |           |       | 1                | 99           | 20.59               | 20.0±1               | 1.0      |
|         |        |           |       | 12               | 0            | 19.68               | 20.0±1               | 1.0      |
|         |        |           |       | 12               | 24           | 19.72               | 20.0±1               | 1.0      |
|         |        |           |       | 12               | 49           | 19.66               | 20.0±1               | 1.0      |
| 25      |        |           |       | 0                | 19.63        | 20.0±1              | 1.0                  |          |
| 21425   | 2567.5 | QPSK      | 1     | 0                | 21.35        | 21.0±1              | /                    |          |
|         |        |           | 1     | 49               | 21.4         | 21.0±1              | /                    |          |
|         |        |           | 1     | 99               | 21.29        | 21.0±1              | /                    |          |
|         |        |           | 12    | 0                | 20.38        | 21.0±1              | 1.0                  |          |
|         |        |           | 12    | 24               | 20.44        | 21.0±1              | 1.0                  |          |
|         |        |           | 12    | 49               | 20.39        | 21.0±1              | 1.0                  |          |
|         |        |           | 25    | 0                | 20.4         | 21.0±1              | 1.0                  |          |
|         |        | 16QAM     | 1     | 0                | 20.45        | 20.0±1              | 1.0                  |          |
|         |        |           | 1     | 49               | 20.5         | 20.0±1              | 1.0                  |          |
|         |        |           | 1     | 99               | 20.41        | 20.0±1              | 1.0                  |          |
|         |        |           | 12    | 0                | 19.48        | 20.0±1              | 1.0                  |          |
|         |        |           | 12    | 24               | 19.54        | 20.0±1              | 1.0                  |          |
|         |        |           | 12    | 49               | 19.47        | 20.0±1              | 1.0                  |          |
|         |        |           | 25    | 0                | 19.46        | 20.0±1              | 1.0                  |          |



| BW(MHz) | Ch    | Freq(MHz) | Mode  | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|-------|-----------|-------|------------------|--------------|---------------------|----------------------|----------|
| 10MHz   | 20800 | 2505      | QPSK  | 1                | 0            | 21.59               | 21.0±1               | /        |
|         |       |           |       | 1                | 49           | 21.76               | 21.0±1               | /        |
|         |       |           |       | 1                | 99           | 21.65               | 21.0±1               | /        |
|         |       |           |       | 25               | 0            | 20.65               | 21.0±1               | 1.0      |
|         |       |           |       | 25               | 24           | 20.71               | 21.0±1               | 1.0      |
|         |       |           |       | 25               | 49           | 20.78               | 21.0±1               | 1.0      |
|         |       |           |       | 50               | 0            | 20.71               | 21.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 20.49               | 20.0±1               | 1.0      |
|         |       |           |       | 1                | 49           | 20.63               | 20.0±1               | 1.0      |
|         |       |           |       | 1                | 99           | 20.5                | 20.0±1               | 1.0      |
|         |       |           |       | 25               | 0            | 19.73               | 20.0±1               | 1.0      |
|         |       |           |       | 25               | 24           | 19.83               | 20.0±1               | 1.0      |
|         |       |           |       | 25               | 49           | 19.86               | 20.0±1               | 1.0      |
|         |       |           |       | 50               | 0            | 19.77               | 20.0±1               | 1.0      |
|         | 21100 | 2535      | QPSK  | 1                | 0            | 21.56               | 21.0±1               | /        |
|         |       |           |       | 1                | 49           | 21.7                | 21.0±1               | /        |
|         |       |           |       | 1                | 99           | 21.57               | 21.0±1               | /        |
|         |       |           |       | 25               | 0            | 20.66               | 21.0±1               | 1.0      |
|         |       |           |       | 25               | 24           | 20.63               | 21.0±1               | 1.0      |
|         |       |           |       | 25               | 49           | 20.59               | 21.0±1               | 1.0      |
|         |       |           |       | 50               | 0            | 20.63               | 21.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 20.93               | 20.5±1               | 1.0      |
|         |       |           |       | 1                | 49           | 21.03               | 20.5±1               | 1.0      |
|         |       |           |       | 1                | 99           | 20.88               | 20.5±1               | 1.0      |
|         |       |           |       | 25               | 0            | 19.77               | 20.5±1               | 1.0      |
|         |       |           |       | 25               | 24           | 19.71               | 20.5±1               | 1.0      |
|         |       |           |       | 25               | 49           | 19.73               | 20.5±1               | 1.0      |
|         |       |           |       | 50               | 0            | 19.68               | 20.5±1               | 1.0      |
|         | 21400 | 2565      | QPSK  | 1                | 0            | 21.44               | 21.0±1               | /        |
|         |       |           |       | 1                | 49           | 21.57               | 21.0±1               | /        |
| 1       |       |           |       | 99               | 21.33        | 21.0±1              | /                    |          |
| 25      |       |           |       | 0                | 20.47        | 20.0±1              | 1.0                  |          |
| 25      |       |           |       | 24               | 20.4         | 20.0±1              | 1.0                  |          |
| 25      |       |           |       | 49               | 20.42        | 20.0±1              | 1.0                  |          |
| 50      |       |           |       | 0                | 20.43        | 20.0±1              | 1.0                  |          |
| 16QAM   |       |           | 1     | 0                | 20.44        | 20.0±1              | 1.0                  |          |
|         |       |           | 1     | 49               | 20.47        | 20.0±1              | 1.0                  |          |
|         |       |           | 1     | 99               | 20.23        | 20.0±1              | 1.0                  |          |
|         |       |           | 25    | 0                | 19.61        | 20.0±1              | 1.0                  |          |
|         |       |           | 25    | 24               | 19.58        | 20.0±1              | 1.0                  |          |
|         |       |           | 25    | 49               | 19.56        | 20.0±1              | 1.0                  |          |
|         |       |           | 50    | 0                | 19.51        | 20.0±1              | 1.0                  |          |

| BW(MHz) | Ch    | Freq(MHz) | Mode  | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|-------|-----------|-------|------------------|--------------|---------------------|----------------------|----------|
| 15MHz   | 20825 | 2507.5    | QPSK  | 1                | 0            | 21.53               | 21.0±1               | /        |
|         |       |           |       | 1                | 49           | 21.68               | 21.0±1               | /        |
|         |       |           |       | 1                | 99           | 21.53               | 21.0±1               | /        |
|         |       |           |       | 36               | 0            | 20.7                | 21.0±1               | 1.0      |
|         |       |           |       | 36               | 24           | 20.77               | 21.0±1               | 1.0      |
|         |       |           |       | 36               | 49           | 20.78               | 21.0±1               | 1.0      |
|         |       |           |       | 75               | 0            | 20.76               | 21.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 20.4                | 20.0±1               | 1.0      |
|         |       |           |       | 1                | 49           | 20.52               | 20.0±1               | 1.0      |
|         |       |           |       | 1                | 99           | 20.41               | 20.0±1               | 1.0      |
|         |       |           |       | 36               | 0            | 19.72               | 20.0±1               | 1.0      |
|         |       |           |       | 36               | 24           | 19.8                | 20.0±1               | 1.0      |
|         |       |           |       | 36               | 49           | 19.84               | 20.0±1               | 1.0      |
|         |       |           |       | 75               | 0            | 19.76               | 20.0±1               | 1.0      |
|         | 21100 | 2535      | QPSK  | 1                | 0            | 21.52               | 21.0±1               | /        |
|         |       |           |       | 1                | 49           | 21.58               | 21.0±1               | /        |
|         |       |           |       | 1                | 99           | 21.43               | 21.0±1               | /        |
|         |       |           |       | 36               | 0            | 20.65               | 21.0±1               | 1.0      |
|         |       |           |       | 36               | 24           | 20.67               | 21.0±1               | 1.0      |
|         |       |           |       | 36               | 49           | 20.58               | 21.0±1               | 1.0      |
|         |       |           |       | 75               | 0            | 20.61               | 21.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 20.91               | 20.0±1               | 1.0      |
|         |       |           |       | 1                | 49           | 20.98               | 20.0±1               | 1.0      |
|         |       |           |       | 1                | 99           | 20.82               | 20.0±1               | 1.0      |
|         |       |           |       | 36               | 0            | 19.76               | 20.0±1               | 1.0      |
|         |       |           |       | 36               | 24           | 19.7                | 20.0±1               | 1.0      |
|         |       |           |       | 36               | 49           | 19.66               | 20.0±1               | 1.0      |
|         |       |           |       | 75               | 0            | 19.68               | 20.0±1               | 1.0      |
|         | 21375 | 2562.5    | QPSK  | 1                | 0            | 21.42               | 21.0±1               | /        |
|         |       |           |       | 1                | 49           | 21.47               | 21.0±1               | /        |
| 1       |       |           |       | 99               | 21.23        | 21.0±1              | /                    |          |
| 36      |       |           |       | 0                | 20.57        | 21.0±1              | 1.0                  |          |
| 36      |       |           |       | 24               | 20.54        | 21.0±1              | 1.0                  |          |
| 36      |       |           |       | 49               | 20.43        | 21.0±1              | 1.0                  |          |
| 75      |       |           |       | 0                | 20.49        | 21.0±1              | 1.0                  |          |
| 16QAM   |       |           | 1     | 0                | 20.82        | 20.0±1              | 1.0                  |          |
|         |       |           | 1     | 49               | 20.76        | 20.0±1              | 1.0                  |          |
|         |       |           | 1     | 99               | 20.49        | 20.0±1              | 1.0                  |          |
|         |       |           | 36    | 0                | 19.52        | 20.0±1              | 1.0                  |          |
|         |       |           | 36    | 24               | 19.54        | 20.0±1              | 1.0                  |          |
|         |       |           | 36    | 49               | 19.42        | 20.0±1              | 1.0                  |          |
|         |       |           | 75    | 0                | 19.54        | 20.0±1              | 1.0                  |          |

| BW(MHz) | Ch    | Freq(MHz) | Mode  | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|-------|-----------|-------|------------------|--------------|---------------------|----------------------|----------|
| 20MHz   | 20850 | 2510      | QPSK  | 1                | 0            | 21.44               | 21.0±1               | /        |
|         |       |           |       | 1                | 49           | 21.83               | 21.0±1               | /        |
|         |       |           |       | 1                | 99           | 21.48               | 21.0±1               | /        |
|         |       |           |       | 50               | 0            | 20.53               | 21.0±1               | 1.0      |
|         |       |           |       | 50               | 24           | 20.67               | 21.0±1               | 1.0      |
|         |       |           |       | 50               | 49           | 20.65               | 21.0±1               | 1.0      |
|         |       |           |       | 100              | 0            | 20.59               | 21.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 20.94               | 20.5±1               | 1.0      |
|         |       |           |       | 1                | 49           | 21.3                | 20.5±1               | 1.0      |
|         |       |           |       | 1                | 99           | 21                  | 20.5±1               | 1.0      |
|         |       |           |       | 50               | 0            | 19.65               | 20.5±1               | 1.0      |
|         |       |           |       | 50               | 24           | 19.81               | 20.5±1               | 1.0      |
|         |       |           |       | 50               | 49           | 19.76               | 20.5±1               | 1.0      |
|         |       |           |       | 100              | 0            | 19.74               | 20.5±1               | 1.0      |
|         | 21100 | 2535      | QPSK  | 1                | 0            | 21.5                | 21.0±1               | /        |
|         |       |           |       | 1                | 49           | 21.73               | 21.0±1               | /        |
|         |       |           |       | 1                | 99           | 21.43               | 21.0±1               | /        |
|         |       |           |       | 50               | 0            | 20.59               | 21.0±1               | 1.0      |
|         |       |           |       | 50               | 24           | 20.62               | 21.0±1               | 1.0      |
|         |       |           |       | 50               | 49           | 20.52               | 21.0±1               | 1.0      |
|         |       |           |       | 100              | 0            | 20.57               | 21.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 20.86               | 20.5±1               | 1.0      |
|         |       |           |       | 1                | 49           | 21.11               | 20.5±1               | 1.0      |
|         |       |           |       | 1                | 99           | 20.82               | 20.5±1               | 1.0      |
|         |       |           |       | 50               | 0            | 19.71               | 20.5±1               | 1.0      |
|         |       |           |       | 50               | 24           | 19.72               | 20.5±1               | 1.0      |
|         |       |           |       | 50               | 49           | 19.61               | 20.5±1               | 1.0      |
|         |       |           |       | 100              | 0            | 19.67               | 20.5±1               | 1.0      |
|         | 21350 | 2560      | QPSK  | 1                | 0            | 21.34               | 21.0±1               | /        |
|         |       |           |       | 1                | 49           | 21.54               | 21.0±1               | /        |
| 1       |       |           |       | 99               | 21.11        | 21.0±1              | /                    |          |
| 50      |       |           |       | 0                | 20.46        | 21.0±1              | 1.0                  |          |
| 50      |       |           |       | 24               | 20.45        | 21.0±1              | 1.0                  |          |
| 50      |       |           |       | 49               | 20.4         | 21.0±1              | 1.0                  |          |
| 100     |       |           |       | 0                | 20.43        | 21.0±1              | 1.0                  |          |
| 16QAM   |       |           | 1     | 0                | 20.69        | 20.0±1              | 1.0                  |          |
|         |       |           | 1     | 49               | 20.88        | 20.0±1              | 1.0                  |          |
|         |       |           | 1     | 99               | 20.37        | 20.0±1              | 1.0                  |          |
|         |       |           | 50    | 0                | 19.53        | 20.0±1              | 1.0                  |          |
|         |       |           | 50    | 24               | 19.51        | 20.0±1              | 1.0                  |          |
|         |       |           | 50    | 49               | 19.42        | 20.0±1              | 1.0                  |          |
|         |       |           | 100   | 0                | 19.51        | 20.0±1              | 1.0                  |          |

## LTE Band 12:

| BW(MHz) | Ch    | Freq(MHz) | Mode   | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|-------|-----------|--------|------------------|--------------|---------------------|----------------------|----------|
| 1.4MHz  | 23017 | 699.7     | QPSK   | 1                | 0            | 22.59               | 22.0±1               | /        |
|         |       |           |        | 1                | 2            | 22.76               | 22.0±1               | /        |
|         |       |           |        | 1                | 5            | 22.63               | 22.0±1               | /        |
|         |       |           |        | 3                | 0            | 22.77               | 22.0±1               | /        |
|         |       |           |        | 3                | 1            | 22.82               | 22.0±1               | /        |
|         |       |           |        | 3                | 2            | 22.8                | 22.0±1               | /        |
|         |       |           | 6      | 0                | 21.74        | 22.0±1              | 1.0                  |          |
|         |       |           | 16QAM  | 1                | 0            | 21.69               | 21.0±1               | 1.0      |
|         |       |           |        | 1                | 2            | 21.92               | 21.0±1               | 1.0      |
|         |       |           |        | 1                | 5            | 21.79               | 21.0±1               | 1.0      |
|         |       |           |        | 3                | 0            | 21.76               | 21.0±1               | 1.0      |
|         |       |           |        | 3                | 1            | 21.81               | 21.0±1               | 1.0      |
|         | 3     | 2         |        | 21.83            | 21.0±1       | 1.0                 |                      |          |
|         | 6     | 0         | 20.91  | 21.0±1           | 1.0          |                     |                      |          |
|         | 23095 | 707.5     | QPSK   | 1                | 0            | 22.74               | 22.0±1               | /        |
|         |       |           |        | 1                | 2            | 22.91               | 22.0±1               | /        |
|         |       |           |        | 1                | 5            | 22.77               | 22.0±1               | /        |
|         |       |           |        | 3                | 0            | 22.82               | 22.0±1               | /        |
|         |       |           |        | 3                | 1            | 22.87               | 22.0±1               | /        |
|         |       |           |        | 3                | 2            | 22.91               | 22.0±1               | /        |
|         |       |           | 6      | 0                | 21.86        | 22.0±1              | 1.0                  |          |
|         |       |           | 16QAM  | 1                | 0            | 22.02               | 21.5±1               | 1.0      |
|         |       |           |        | 1                | 2            | 22.19               | 21.5±1               | 1.0      |
|         |       |           |        | 1                | 5            | 22.01               | 21.5±1               | 1.0      |
|         |       |           |        | 3                | 0            | 21.96               | 21.5±1               | 1.0      |
|         |       |           |        | 3                | 1            | 21.95               | 21.5±1               | 1.0      |
|         | 3     | 2         |        | 22               | 21.5±1       | 1.0                 |                      |          |
|         | 6     | 0         | 20.76  | 21.5±1           | 1.0          |                     |                      |          |
|         | 23173 | 715.3     | QPSK   | 1                | 0            | 22.77               | 22.5±1               | /        |
|         |       |           |        | 1                | 2            | 23.11               | 22.5±1               | /        |
| 1       |       |           |        | 5                | 22.88        | 22.5±1              | /                    |          |
| 3       |       |           |        | 0                | 22.86        | 22.5±1              | /                    |          |
| 3       |       |           |        | 1                | 22.91        | 22.5±1              | /                    |          |
| 3       |       |           |        | 2                | 22.86        | 22.5±1              | /                    |          |
| 6       |       |           | 0      | 21.81            | 22.5±1       | 1.0                 |                      |          |
| 16QAM   |       |           | 1      | 0                | 21.68        | 21.0±1              | 1.0                  |          |
|         |       |           | 1      | 2                | 21.8         | 21.0±1              | 1.0                  |          |
|         |       |           | 1      | 5                | 21.62        | 21.0±1              | 1.0                  |          |
|         |       |           | 3      | 0                | 21.92        | 21.0±1              | 1.0                  |          |
|         |       |           | 3      | 1                | 21.95        | 21.0±1              | 1.0                  |          |
|         | 3     | 2         | 21.89  | 21.0±1           | 1.0          |                     |                      |          |
| 6       | 0     | 21.02     | 21.0±1 | 1.0              |              |                     |                      |          |

| BW(MHz) | Ch    | Freq(MHz) | Mode  | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|-------|-----------|-------|------------------|--------------|---------------------|----------------------|----------|
| 3MHz    | 23025 | 700.5     | QPSK  | 1                | 0            | 22.62               | 22.0±1               | /        |
|         |       |           |       | 1                | 8            | 22.71               | 22.0±1               | /        |
|         |       |           |       | 1                | 14           | 22.71               | 22.0±1               | /        |
|         |       |           |       | 8                | 0            | 21.78               | 22.0±1               | 1.0      |
|         |       |           |       | 8                | 4            | 21.79               | 22.0±1               | 1.0      |
|         |       |           |       | 8                | 9            | 21.75               | 22.0±1               | 1.0      |
|         |       |           |       | 15               | 0            | 21.72               | 22.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 21.53               | 21.0±1               | 1.0      |
|         |       |           |       | 1                | 8            | 21.64               | 21.0±1               | 1.0      |
|         |       |           |       | 1                | 14           | 21.61               | 21.0±1               | 1.0      |
|         |       |           |       | 8                | 0            | 20.89               | 21.0±1               | 1.0      |
|         |       |           |       | 8                | 4            | 20.98               | 21.0±1               | 1.0      |
|         |       |           |       | 8                | 9            | 20.91               | 21.0±1               | 1.0      |
|         |       |           |       | 15               | 0            | 20.86               | 21.0±1               | 1.0      |
|         |       |           |       | 23095            | 707.5        | QPSK                | 1                    | 0        |
|         | 1     | 8         | 22.79 |                  |              |                     | 22.0±1               | /        |
|         | 1     | 14        | 22.77 |                  |              |                     | 22.0±1               | /        |
|         | 8     | 0         | 21.81 |                  |              |                     | 22.0±1               | 1.0      |
|         | 8     | 4         | 21.88 |                  |              |                     | 22.0±1               | 1.0      |
|         | 8     | 9         | 21.81 |                  |              |                     | 22.0±1               | 1.0      |
|         | 15    | 0         | 21.83 |                  |              |                     | 22.0±1               | 1.0      |
|         | 16QAM | 1         | 0     |                  |              | 22.04               | 21.5±1               | 1.0      |
|         |       | 1         | 8     |                  |              | 22.04               | 21.5±1               | 1.0      |
|         |       | 1         | 14    |                  |              | 22.1                | 21.5±1               | 1.0      |
|         |       | 8         | 0     |                  |              | 20.89               | 21.5±1               | 1.0      |
|         |       | 8         | 4     |                  |              | 20.95               | 21.5±1               | 1.0      |
|         |       | 8         | 9     |                  |              | 20.88               | 21.5±1               | 1.0      |
|         |       | 15        | 0     |                  |              | 20.88               | 21.5±1               | 1.0      |
|         |       | 23165     | 714.5 |                  |              | QPSK                | 1                    | 0        |
|         | 1     |           |       | 8                | 22.81        |                     | 22.0±1               | /        |
| 1       | 14    |           |       | 22.92            | 22.0±1       |                     | /                    |          |
| 8       | 0     |           |       | 21.81            | 22.0±1       |                     | 1.0                  |          |
| 8       | 4     |           |       | 21.82            | 22.0±1       |                     | 1.0                  |          |
| 8       | 9     |           |       | 21.73            | 22.0±1       |                     | 1.0                  |          |
| 15      | 0     |           |       | 21.77            | 22.0±1       |                     | 1.0                  |          |
| 16QAM   | 1     |           |       | 0                | 21.8         | 21.0±1              | 1.0                  |          |
|         | 1     |           |       | 8                | 21.76        | 21.0±1              | 1.0                  |          |
|         | 1     |           |       | 14               | 21.6         | 21.0±1              | 1.0                  |          |
|         | 8     |           |       | 0                | 20.91        | 21.0±1              | 1.0                  |          |
|         | 8     |           |       | 4                | 20.89        | 21.0±1              | 1.0                  |          |
|         | 8     |           |       | 9                | 20.83        | 21.0±1              | 1.0                  |          |
|         | 15    |           |       | 0                | 20.79        | 21.0±1              | 1.0                  |          |

| BW(MHz) | Ch    | Freq(MHz) | Mode  | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|-------|-----------|-------|------------------|--------------|---------------------|----------------------|----------|
| 5MHz    | 23035 | 701.5     | QPSK  | 1                | 0            | 22.56               | 22.0±1               | /        |
|         |       |           |       | 1                | 49           | 22.8                | 22.0±1               | /        |
|         |       |           |       | 1                | 99           | 22.7                | 22.0±1               | /        |
|         |       |           |       | 12               | 0            | 21.64               | 22.0±1               | 1.0      |
|         |       |           |       | 12               | 24           | 21.85               | 22.0±1               | 1.0      |
|         |       |           |       | 12               | 49           | 21.86               | 22.0±1               | 1.0      |
|         |       |           |       | 25               | 0            | 21.72               | 22.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 21.72               | 21.0±1               | 1.0      |
|         |       |           |       | 1                | 49           | 21.9                | 21.0±1               | 1.0      |
|         |       |           |       | 1                | 99           | 21.81               | 21.0±1               | 1.0      |
|         |       |           |       | 12               | 0            | 20.83               | 21.0±1               | 1.0      |
|         |       |           |       | 12               | 24           | 20.96               | 21.0±1               | 1.0      |
|         |       |           |       | 12               | 49           | 20.99               | 21.0±1               | 1.0      |
|         |       |           |       | 25               | 0            | 20.84               | 21.0±1               | 1.0      |
|         | 23095 | 707.5     | QPSK  | 1                | 0            | 22.72               | 22.0±1               | /        |
|         |       |           |       | 1                | 49           | 22.79               | 22.0±1               | /        |
|         |       |           |       | 1                | 99           | 22.62               | 22.0±1               | /        |
|         |       |           |       | 12               | 0            | 21.79               | 22.0±1               | 1.0      |
|         |       |           |       | 12               | 24           | 21.82               | 22.0±1               | 1.0      |
|         |       |           |       | 12               | 49           | 21.74               | 22.0±1               | 1.0      |
|         |       |           |       | 25               | 0            | 21.76               | 22.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 22.11               | 21.5±1               | 1.0      |
|         |       |           |       | 1                | 49           | 22.2                | 21.5±1               | 1.0      |
|         |       |           |       | 1                | 99           | 22.16               | 21.5±1               | 1.0      |
|         |       |           |       | 12               | 0            | 20.95               | 21.5±1               | 1.0      |
|         |       |           |       | 12               | 24           | 21                  | 21.5±1               | 1.0      |
|         |       |           |       | 12               | 49           | 20.89               | 21.5±1               | 1.0      |
|         |       |           |       | 25               | 0            | 20.88               | 21.5±1               | 1.0      |
|         | 23155 | 713.5     | QPSK  | 1                | 0            | 22.72               | 22.0±1               | /        |
|         |       |           |       | 1                | 49           | 22.81               | 22.0±1               | /        |
| 1       |       |           |       | 99               | 22.74        | 22.0±1              | /                    |          |
| 12      |       |           |       | 0                | 21.82        | 22.0±1              | 1.0                  |          |
| 12      |       |           |       | 24               | 21.84        | 22.0±1              | 1.0                  |          |
| 12      |       |           |       | 49               | 21.72        | 22.0±1              | 1.0                  |          |
| 25      |       |           |       | 0                | 21.79        | 22.0±1              | 1.0                  |          |
| 16QAM   |       |           | 1     | 0                | 21.79        | 21.0±1              | 1.0                  |          |
|         |       |           | 1     | 49               | 21.89        | 21.0±1              | 1.0                  |          |
|         |       |           | 1     | 99               | 21.65        | 21.0±1              | 1.0                  |          |
|         |       |           | 12    | 0                | 20.93        | 21.0±1              | 1.0                  |          |
|         |       |           | 12    | 24               | 20.95        | 21.0±1              | 1.0                  |          |
|         |       |           | 12    | 49               | 20.81        | 21.0±1              | 1.0                  |          |
|         |       |           | 25    | 0                | 20.8         | 21.0±1              | 1.0                  |          |

| BW(MHz) | Ch    | Freq(MHz) | Mode  | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|-------|-----------|-------|------------------|--------------|---------------------|----------------------|----------|
| 10MHz   | 23060 | 704       | QPSK  | 1                | 0            | 22.63               | 22.0±1               | /        |
|         |       |           |       | 1                | 49           | 22.98               | 22.0±1               | /        |
|         |       |           |       | 1                | 99           | 22.77               | 22.0±1               | /        |
|         |       |           |       | 25               | 0            | 21.69               | 22.0±1               | 1.0      |
|         |       |           |       | 25               | 24           | 21.8                | 22.0±1               | 1.0      |
|         |       |           |       | 25               | 49           | 21.76               | 22.0±1               | 1.0      |
|         |       |           |       | 50               | 0            | 21.77               | 22.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 21.52               | 21.0±1               | 1.0      |
|         |       |           |       | 1                | 49           | 21.76               | 21.0±1               | 1.0      |
|         |       |           |       | 1                | 99           | 21.57               | 21.0±1               | 1.0      |
|         |       |           |       | 25               | 0            | 20.77               | 21.0±1               | 1.0      |
|         |       |           |       | 25               | 24           | 20.89               | 21.0±1               | 1.0      |
|         |       |           |       | 25               | 49           | 20.86               | 21.0±1               | 1.0      |
|         |       |           |       | 50               | 0            | 20.8                | 21.0±1               | 1.0      |
|         | 23095 | 707.5     | QPSK  | 1                | 0            | 22.78               | 22.0±1               | /        |
|         |       |           |       | 1                | 49           | 22.91               | 22.0±1               | /        |
|         |       |           |       | 1                | 99           | 22.76               | 22.0±1               | /        |
|         |       |           |       | 25               | 0            | 21.75               | 22.0±1               | 1.0      |
|         |       |           |       | 25               | 24           | 21.82               | 22.0±1               | 1.0      |
|         |       |           |       | 25               | 49           | 21.71               | 22.0±1               | 1.0      |
|         |       |           |       | 50               | 0            | 21.78               | 22.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 22.09               | 21.5±1               | 1.0      |
|         |       |           |       | 1                | 49           | 22.2                | 21.5±1               | 1.0      |
|         |       |           |       | 1                | 99           | 22.17               | 21.5±1               | 1.0      |
|         |       |           |       | 25               | 0            | 20.85               | 21.5±1               | 1.0      |
|         |       |           |       | 25               | 24           | 20.92               | 21.5±1               | 1.0      |
|         |       |           |       | 25               | 49           | 20.83               | 21.5±1               | 1.0      |
|         |       |           |       | 50               | 0            | 20.84               | 21.5±1               | 1.0      |
|         | 23130 | 711       | QPSK  | 1                | 0            | 22.84               | 22.5±1               | /        |
|         |       |           |       | 1                | 49           | 23.14               | 22.5±1               | /        |
| 1       |       |           |       | 99               | 22.94        | 22.5±1              | /                    |          |
| 25      |       |           |       | 0                | 21.9         | 22.5±1              | 1.0                  |          |
| 25      |       |           |       | 24               | 21.83        | 22.5±1              | 1.0                  |          |
| 25      |       |           |       | 49               | 21.8         | 22.5±1              | 1.0                  |          |
| 50      |       |           |       | 0                | 21.91        | 22.5±1              | 1.0                  |          |
| 16QAM   |       |           | 1     | 0                | 21.71        | 21.0±1              | 1.0                  |          |
|         |       |           | 1     | 49               | 21.94        | 21.0±1              | 1.0                  |          |
|         |       |           | 1     | 99               | 21.63        | 21.0±1              | 1.0                  |          |
|         |       |           | 25    | 0                | 21.05        | 21.0±1              | 1.0                  |          |
|         |       |           | 25    | 24               | 20.98        | 21.0±1              | 1.0                  |          |
|         |       |           | 25    | 49               | 20.99        | 21.0±1              | 1.0                  |          |
|         |       |           | 50    | 0                | 21.03        | 21.0±1              | 1.0                  |          |

**LTE Band 13:**

| BW(MHz) | Ch    | Freq(MHz) | Mode  | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|-------|-----------|-------|------------------|--------------|---------------------|----------------------|----------|
| 5MHz    | 23205 | 779.5     | QPSK  | 1                | 0            | 22.67               | 22.0±1               | /        |
|         |       |           |       | 1                | 49           | 22.8                | 22.0±1               | /        |
|         |       |           |       | 1                | 99           | 22.63               | 22.0±1               | /        |
|         |       |           |       | 12               | 0            | 21.76               | 22.0±1               | 1.0      |
|         |       |           |       | 12               | 24           | 21.82               | 22.0±1               | 1.0      |
|         |       |           |       | 12               | 49           | 21.78               | 22.0±1               | 1.0      |
|         |       |           |       | 25               | 0            | 21.79               | 22.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 21.77               | 21.0±1               | 1.0      |
|         |       |           |       | 1                | 49           | 21.91               | 21.0±1               | 1.0      |
|         |       |           |       | 1                | 99           | 21.8                | 21.0±1               | 1.0      |
|         |       |           |       | 12               | 0            | 20.84               | 21.0±1               | 1.0      |
|         |       |           |       | 12               | 24           | 20.94               | 21.0±1               | 1.0      |
|         |       |           |       | 12               | 49           | 20.84               | 21.0±1               | 1.0      |
|         |       |           |       | 25               | 0            | 20.81               | 21.0±1               | 1.0      |
|         | 23230 | 782.0     | QPSK  | 1                | 0            | 22.68               | 22.0±1               | /        |
|         |       |           |       | 1                | 49           | 22.74               | 22.0±1               | /        |
|         |       |           |       | 1                | 99           | 22.62               | 22.0±1               | /        |
|         |       |           |       | 12               | 0            | 21.75               | 22.0±1               | 1.0      |
|         |       |           |       | 12               | 24           | 21.83               | 22.0±1               | 1.0      |
|         |       |           |       | 12               | 49           | 21.79               | 22.0±1               | 1.0      |
|         |       |           |       | 25               | 0            | 21.79               | 22.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 21.89               | 21.0±1               | 1.0      |
|         |       |           |       | 1                | 49           | 21.95               | 21.0±1               | 1.0      |
|         |       |           |       | 1                | 99           | 21.77               | 21.0±1               | 1.0      |
|         |       |           |       | 12               | 0            | 20.85               | 21.0±1               | 1.0      |
|         |       |           |       | 12               | 24           | 20.9                | 21.0±1               | 1.0      |
|         |       |           |       | 12               | 49           | 20.87               | 21.0±1               | 1.0      |
| 25      |       |           |       | 0                | 20.87        | 21.0±1              | 1.0                  |          |
| 23255   | 784.5 | QPSK      | 1     | 0                | 22.65        | 22.0±1              | /                    |          |
|         |       |           | 1     | 49               | 22.71        | 22.0±1              | /                    |          |
|         |       |           | 1     | 99               | 22.63        | 22.0±1              | /                    |          |
|         |       |           | 12    | 0                | 21.7         | 22.0±1              | 1.0                  |          |
|         |       |           | 12    | 24               | 21.75        | 22.0±1              | 1.0                  |          |
|         |       |           | 12    | 49               | 21.67        | 22.0±1              | 1.0                  |          |
|         |       |           | 25    | 0                | 21.65        | 22.0±1              | 1.0                  |          |
|         |       | 16QAM     | 1     | 0                | 22.15        | 21.5±1              | 1.0                  |          |
|         |       |           | 1     | 49               | 22.21        | 21.5±1              | 1.0                  |          |
|         |       |           | 1     | 99               | 22.13        | 21.5±1              | 1.0                  |          |
|         |       |           | 12    | 0                | 20.81        | 21.5±1              | 1.0                  |          |
|         |       |           | 12    | 24               | 20.91        | 21.5±1              | 1.0                  |          |
|         |       |           | 12    | 49               | 20.78        | 21.5±1              | 1.0                  |          |
|         |       |           | 25    | 0                | 20.75        | 21.5±1              | 1.0                  |          |



| BW(MHz) | Ch    | Freq(MHz) | Mode  | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|-------|-----------|-------|------------------|--------------|---------------------|----------------------|----------|
| 10MHz   | 23230 | 782.0     | QPSK  | 1                | 0            | 22.75               | 22.0±1               | /        |
|         |       |           |       | 1                | 49           | 22.91               | 22.0±1               | /        |
|         |       |           |       | 1                | 99           | 22.72               | 22.0±1               | /        |
|         |       |           |       | 25               | 0            | 21.83               | 22.0±1               | 1.0      |
|         |       |           |       | 25               | 24           | 21.81               | 22.0±1               | 1.0      |
|         |       |           |       | 25               | 49           | 21.82               | 22.0±1               | 1.0      |
|         |       |           |       | 50               | 0            | 21.86               | 22.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 21.66               | 21.0±1               | 1.0      |
|         |       |           |       | 1                | 49           | 21.85               | 21.0±1               | 1.0      |
|         |       |           |       | 1                | 99           | 21.57               | 21.0±1               | 1.0      |
|         |       |           |       | 25               | 0            | 20.9                | 21.0±1               | 1.0      |
|         |       |           |       | 25               | 24           | 20.89               | 21.0±1               | 1.0      |
|         |       |           |       | 25               | 49           | 20.89               | 21.0±1               | 1.0      |
|         |       |           |       | 50               | 0            | 20.84               | 21.0±1               | 1.0      |

**LTE Band 66:**

| BW(MHz) | Ch     | Freq(MHz) | Mode   | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|--------|-----------|--------|------------------|--------------|---------------------|----------------------|----------|
| 1.4MHz  | 131979 | 1710.7    | QPSK   | 1                | 0            | 22.52               | 22.0±1               | /        |
|         |        |           |        | 1                | 2            | 22.71               | 22.0±1               | /        |
|         |        |           |        | 1                | 5            | 22.5                | 22.0±1               | /        |
|         |        |           |        | 3                | 0            | 22.61               | 22.0±1               | /        |
|         |        |           |        | 3                | 1            | 22.58               | 22.0±1               | /        |
|         |        |           |        | 3                | 2            | 22.61               | 22.0±1               | /        |
|         |        |           | 16QAM  | 6                | 0            | 21.6                | 22.0±1               | 1.0      |
|         |        |           |        | 1                | 0            | 21.63               | 21.0±1               | 1.0      |
|         |        |           |        | 1                | 2            | 21.84               | 21.0±1               | 1.0      |
|         |        |           |        | 1                | 5            | 21.66               | 21.0±1               | 1.0      |
|         |        |           |        | 3                | 0            | 21.59               | 21.0±1               | 1.0      |
|         |        |           |        | 3                | 1            | 21.67               | 21.0±1               | 1.0      |
|         | 132321 | 1744.9    | QPSK   | 3                | 2            | 21.64               | 21.0±1               | 1.0      |
|         |        |           |        | 6                | 0            | 20.79               | 21.0±1               | 1.0      |
|         |        |           |        | 1                | 0            | 22.43               | 22.0±1               | /        |
|         |        |           |        | 1                | 2            | 22.57               | 22.0±1               | /        |
|         |        |           |        | 1                | 5            | 22.43               | 22.0±1               | /        |
|         |        |           |        | 3                | 0            | 22.45               | 22.0±1               | /        |
|         |        |           | 16QAM  | 3                | 1            | 22.52               | 22.0±1               | /        |
|         |        |           |        | 3                | 2            | 22.5                | 22.0±1               | /        |
|         |        |           |        | 6                | 0            | 21.46               | 22.0±1               | 1.0      |
|         |        |           |        | 1                | 0            | 21.82               | 21.0±1               | 1.0      |
|         |        |           |        | 1                | 2            | 21.93               | 21.0±1               | 1.0      |
|         |        |           |        | 1                | 5            | 21.8                | 21.0±1               | 1.0      |
|         | 132664 | 1779.2    | QPSK   | 3                | 0            | 21.67               | 21.0±1               | 1.0      |
|         |        |           |        | 3                | 1            | 21.68               | 21.0±1               | 1.0      |
|         |        |           |        | 3                | 2            | 21.66               | 21.0±1               | 1.0      |
| 6       |        |           |        | 0                | 20.4         | 21.0±1              | 1.0                  |          |
| 1       |        |           |        | 0                | 22.22        | 22.0±1              | /                    |          |
| 1       |        |           |        | 2                | 22.44        | 22.0±1              | /                    |          |
| 16QAM   |        |           | 1      | 5                | 22.24        | 22.0±1              | /                    |          |
|         |        |           | 3      | 0                | 22.34        | 22.0±1              | /                    |          |
|         |        |           | 3      | 1                | 22.37        | 22.0±1              | /                    |          |
|         |        |           | 3      | 2                | 22.36        | 22.0±1              | /                    |          |
|         |        |           | 6      | 0                | 21.3         | 22.0±1              | 1.0                  |          |
|         |        |           | 1      | 0                | 21.3         | 21.0±1              | 1.0                  |          |
| 1       | 2      | 21.47     | 21.0±1 | 1.0              |              |                     |                      |          |
| 1       | 5      | 21.33     | 21.0±1 | 1.0              |              |                     |                      |          |
| 3       | 0      | 21.49     | 21.0±1 | 1.0              |              |                     |                      |          |
| 3       | 1      | 21.55     | 21.0±1 | 1.0              |              |                     |                      |          |
| 3       | 2      | 21.52     | 21.0±1 | 1.0              |              |                     |                      |          |
| 6       | 0      | 20.49     | 21.0±1 | 1.0              |              |                     |                      |          |

| BW(MHz) | Ch     | Freq(MHz) | Mode   | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|--------|-----------|--------|------------------|--------------|---------------------|----------------------|----------|
| 3MHz    | 131987 | 1711.5    | QPSK   | 1                | 0            | 22.59               | 22.0±1               | /        |
|         |        |           |        | 1                | 8            | 22.62               | 22.0±1               | /        |
|         |        |           |        | 1                | 14           | 22.59               | 22.0±1               | /        |
|         |        |           |        | 6                | 0            | 21.65               | 22.0±1               | 1.0      |
|         |        |           |        | 6                | 4            | 21.68               | 22.0±1               | 1.0      |
|         |        |           |        | 6                | 9            | 21.57               | 22.0±1               | 1.0      |
|         |        |           |        | 15               | 0            | 21.59               | 22.0±1               | 1.0      |
|         |        |           | 16QAM  | 1                | 0            | 21.53               | 21.0±1               | 1.0      |
|         |        |           |        | 1                | 8            | 21.49               | 21.0±1               | 1.0      |
|         |        |           |        | 1                | 14           | 21.51               | 21.0±1               | 1.0      |
|         |        |           |        | 8                | 0            | 20.76               | 21.0±1               | 1.0      |
|         |        |           |        | 8                | 4            | 20.76               | 21.0±1               | 1.0      |
|         |        |           |        | 8                | 9            | 20.75               | 21.0±1               | 1.0      |
|         |        |           |        | 15               | 0            | 20.68               | 21.0±1               | 1.0      |
|         |        |           |        | 132321           | 1744.9       | QPSK                | 1                    | 0        |
|         | 1      | 8         | 22.54  |                  |              |                     | 22.5±1               | /        |
|         | 1      | 14        | 22.46  |                  |              |                     | 22.5±1               | /        |
|         | 6      | 0         | 21.51  |                  |              |                     | 22.5±1               | 1.0      |
|         | 6      | 4         | 21.54  |                  |              |                     | 22.5±1               | 1.0      |
|         | 6      | 9         | 21.49  |                  |              |                     | 22.5±1               | 1.0      |
|         | 15     | 0         | 21.5   |                  |              |                     | 22.5±1               | 1.0      |
|         | 16QAM  | 1         | 0      |                  |              | 21.82               | 21.0±1               | 1.0      |
|         |        | 1         | 8      |                  |              | 21.86               | 21.0±1               | 1.0      |
|         |        | 1         | 14     |                  |              | 21.83               | 21.0±1               | 1.0      |
|         |        | 6         | 0      |                  |              | 20.64               | 21.0±1               | 1.0      |
|         |        | 6         | 4      |                  |              | 20.64               | 21.0±1               | 1.0      |
|         |        | 6         | 9      |                  |              | 20.58               | 21.0±1               | 1.0      |
|         |        | 15        | 0      |                  |              | 20.54               | 21.0±1               | 1.0      |
|         |        | 132656    | 1778.4 |                  |              | QPSK                | 1                    | 0        |
|         | 1      |           |        | 8                | 22.35        |                     | 22.0±1               | /        |
| 1       | 14     |           |        | 22.33            | 22.0±1       |                     | /                    |          |
| 6       | 0      |           |        | 21.31            | 22.0±1       |                     | 1.0                  |          |
| 6       | 4      |           |        | 21.4             | 22.0±1       |                     | 1.0                  |          |
| 6       | 9      |           |        | 21.34            | 22.0±1       |                     | 1.0                  |          |
| 15      | 0      |           |        | 21.35            | 22.0±1       |                     | 1.0                  |          |
| 16QAM   | 1      |           |        | 0                | 21.45        | 21.0±1              | 1.0                  |          |
|         | 1      |           |        | 8                | 21.34        | 21.0±1              | 1.0                  |          |
|         | 1      |           |        | 14               | 21.33        | 21.0±1              | 1.0                  |          |
|         | 8      |           |        | 0                | 20.41        | 21.0±1              | 1.0                  |          |
|         | 8      |           |        | 4                | 20.43        | 21.0±1              | 1.0                  |          |
|         | 8      |           |        | 9                | 20.38        | 21.0±1              | 1.0                  |          |
|         | 15     |           |        | 0                | 20.29        | 21.0±1              | 1.0                  |          |

| BW(MHz) | Ch     | Freq(MHz) | Mode  | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|--------|-----------|-------|------------------|--------------|---------------------|----------------------|----------|
| 5MHz    | 131997 | 1712.5    | QPSK  | 1                | 0            | 22.52               | 22.0±1               | /        |
|         |        |           |       | 1                | 49           | 22.69               | 22.0±1               | /        |
|         |        |           |       | 1                | 99           | 22.47               | 22.0±1               | /        |
|         |        |           |       | 12               | 0            | 21.59               | 22.0±1               | 1.0      |
|         |        |           |       | 12               | 24           | 21.63               | 22.0±1               | 1.0      |
|         |        |           |       | 12               | 49           | 21.62               | 22.0±1               | 1.0      |
|         |        |           |       | 25               | 0            | 21.6                | 22.0±1               | 1.0      |
|         |        |           | 16QAM | 1                | 0            | 21.66               | 21.0±1               | 1.0      |
|         |        |           |       | 1                | 49           | 21.83               | 21.0±1               | 1.0      |
|         |        |           |       | 1                | 99           | 21.66               | 21.0±1               | 1.0      |
|         |        |           |       | 12               | 0            | 20.64               | 21.0±1               | 1.0      |
|         |        |           |       | 12               | 24           | 20.77               | 21.0±1               | 1.0      |
|         |        |           |       | 12               | 49           | 20.69               | 21.0±1               | 1.0      |
|         |        |           |       | 25               | 0            | 20.64               | 21.0±1               | 1.0      |
|         | 132321 | 1744.9    | QPSK  | 1                | 0            | 22.39               | 22.0±1               | /        |
|         |        |           |       | 1                | 49           | 22.55               | 22.0±1               | /        |
|         |        |           |       | 1                | 99           | 22.36               | 22.0±1               | /        |
|         |        |           |       | 12               | 0            | 21.46               | 22.0±1               | 1.0      |
|         |        |           |       | 12               | 24           | 21.52               | 22.0±1               | 1.0      |
|         |        |           |       | 12               | 49           | 21.44               | 22.0±1               | 1.0      |
|         |        |           |       | 25               | 0            | 21.47               | 22.0±1               | 1.0      |
|         |        |           | 16QAM | 1                | 0            | 21.87               | 21.5±1               | 1.0      |
|         |        |           |       | 1                | 49           | 22.06               | 21.5±1               | 1.0      |
|         |        |           |       | 1                | 99           | 21.91               | 21.5±1               | 1.0      |
|         |        |           |       | 12               | 0            | 20.65               | 21.5±1               | 1.0      |
|         |        |           |       | 12               | 24           | 20.68               | 21.5±1               | 1.0      |
|         |        |           |       | 12               | 49           | 20.67               | 21.5±1               | 1.0      |
|         |        |           |       | 25               | 0            | 20.59               | 21.5±1               | 1.0      |
|         | 132646 | 1777.4    | QPSK  | 1                | 0            | 22.2                | 22.0±1               | /        |
|         |        |           |       | 1                | 49           | 22.41               | 22.0±1               | /        |
| 1       |        |           |       | 99               | 22.19        | 22.0±1              | /                    |          |
| 12      |        |           |       | 0                | 21.29        | 22.0±1              | 1.0                  |          |
| 12      |        |           |       | 24               | 21.39        | 22.0±1              | 1.0                  |          |
| 12      |        |           |       | 49               | 21.33        | 22.0±1              | 1.0                  |          |
| 25      |        |           |       | 0                | 21.33        | 22.0±1              | 1.0                  |          |
| 16QAM   |        |           | 1     | 0                | 21.35        | 21.0±1              | 1.0                  |          |
|         |        |           | 1     | 49               | 21.55        | 21.0±1              | 1.0                  |          |
|         |        |           | 1     | 99               | 21.33        | 21.0±1              | 1.0                  |          |
|         |        |           | 12    | 0                | 20.34        | 21.0±1              | 1.0                  |          |
|         |        |           | 12    | 24               | 20.43        | 21.0±1              | 1.0                  |          |
|         |        |           | 12    | 49               | 20.37        | 21.0±1              | 1.0                  |          |
|         |        |           | 25    | 0                | 20.32        | 21.0±1              | 1.0                  |          |

| BW(MHz) | Ch     | Freq(MHz) | Mode  | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|--------|-----------|-------|------------------|--------------|---------------------|----------------------|----------|
| 10MHz   | 132022 | 1715      | QPSK  | 1                | 0            | 22.5                | 22.0±1               | /        |
|         |        |           |       | 1                | 49           | 22.71               | 22.0±1               | /        |
|         |        |           |       | 1                | 99           | 22.55               | 22.0±1               | /        |
|         |        |           |       | 25               | 0            | 21.62               | 22.0±1               | 1.0      |
|         |        |           |       | 25               | 24           | 21.63               | 22.0±1               | 1.0      |
|         |        |           |       | 25               | 49           | 21.61               | 22.0±1               | 1.0      |
|         |        |           |       | 50               | 0            | 21.65               | 22.0±1               | 1.0      |
|         |        |           | 16QAM | 1                | 0            | 21.42               | 21.0±1               | 1.0      |
|         |        |           |       | 1                | 49           | 21.64               | 21.0±1               | 1.0      |
|         |        |           |       | 1                | 99           | 21.51               | 21.0±1               | 1.0      |
|         |        |           |       | 25               | 0            | 20.67               | 21.0±1               | 1.0      |
|         |        |           |       | 25               | 24           | 20.66               | 21.0±1               | 1.0      |
|         |        |           |       | 25               | 49           | 20.67               | 21.0±1               | 1.0      |
|         |        |           |       | 50               | 0            | 20.66               | 21.0±1               | 1.0      |
|         | 132321 | 1744.9    | QPSK  | 1                | 0            | 22.5                | 22.0±1               | /        |
|         |        |           |       | 1                | 49           | 22.66               | 22.0±1               | /        |
|         |        |           |       | 1                | 99           | 22.42               | 22.0±1               | /        |
|         |        |           |       | 25               | 0            | 21.59               | 22.0±1               | 1.0      |
|         |        |           |       | 25               | 24           | 21.52               | 22.0±1               | 1.0      |
|         |        |           |       | 25               | 49           | 21.48               | 22.0±1               | 1.0      |
|         |        |           |       | 50               | 0            | 21.52               | 22.0±1               | 1.0      |
|         |        |           | 16QAM | 1                | 0            | 21.82               | 21.0±1               | 1.0      |
|         |        |           |       | 1                | 49           | 21.97               | 21.0±1               | 1.0      |
|         |        |           |       | 1                | 99           | 21.79               | 21.0±1               | 1.0      |
|         |        |           |       | 25               | 0            | 20.63               | 21.0±1               | 1.0      |
|         |        |           |       | 25               | 24           | 20.58               | 21.0±1               | 1.0      |
|         |        |           |       | 25               | 49           | 20.56               | 21.0±1               | 1.0      |
|         |        |           |       | 50               | 0            | 20.56               | 21.0±1               | 1.0      |
|         | 132621 | 1774.9    | QPSK  | 1                | 0            | 22.32               | 22.0±1               | /        |
|         |        |           |       | 1                | 49           | 22.45               | 22.0±1               | /        |
| 1       |        |           |       | 99               | 22.33        | 22.0±1              | /                    |          |
| 25      |        |           |       | 0                | 21.38        | 22.0±1              | 1.0                  |          |
| 25      |        |           |       | 24               | 21.38        | 22.0±1              | 1.0                  |          |
| 25      |        |           |       | 49               | 21.39        | 22.0±1              | 1.0                  |          |
| 50      |        |           |       | 0                | 21.39        | 22.0±1              | 1.0                  |          |
| 16QAM   |        |           | 1     | 0                | 21.37        | 21.0±1              | 1.0                  |          |
|         |        |           | 1     | 49               | 21.48        | 21.0±1              | 1.0                  |          |
|         |        |           | 1     | 99               | 21.37        | 21.0±1              | 1.0                  |          |
|         |        |           | 25    | 0                | 20.48        | 21.0±1              | 1.0                  |          |
|         |        |           | 25    | 24               | 20.5         | 21.0±1              | 1.0                  |          |
|         |        |           | 25    | 49               | 20.5         | 21.0±1              | 1.0                  |          |
|         |        |           | 50    | 0                | 20.48        | 21.0±1              | 1.0                  |          |

| BW(MHz) | Ch     | Freq(MHz) | Mode  | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|--------|-----------|-------|------------------|--------------|---------------------|----------------------|----------|
| 15MHz   | 132097 | 1722.5    | QPSK  | 1                | 0            | 22.47               | 22.0±1               | /        |
|         |        |           |       | 1                | 49           | 22.59               | 22.0±1               | /        |
|         |        |           |       | 1                | 99           | 22.47               | 22.0±1               | /        |
|         |        |           |       | 36               | 0            | 21.59               | 22.0±1               | 1.0      |
|         |        |           |       | 36               | 24           | 21.66               | 22.0±1               | 1.0      |
|         |        |           |       | 36               | 49           | 21.66               | 22.0±1               | 1.0      |
|         |        |           |       | 75               | 0            | 21.65               | 22.0±1               | 1.0      |
|         |        |           | 16QAM | 1                | 0            | 21.37               | 21.0±1               | 1.0      |
|         |        |           |       | 1                | 49           | 21.52               | 21.0±1               | 1.0      |
|         |        |           |       | 1                | 99           | 21.48               | 21.0±1               | 1.0      |
|         |        |           |       | 36               | 0            | 20.56               | 21.0±1               | 1.0      |
|         |        |           |       | 36               | 24           | 20.64               | 21.0±1               | 1.0      |
|         |        |           |       | 36               | 49           | 20.63               | 21.0±1               | 1.0      |
|         |        |           |       | 75               | 0            | 20.62               | 21.0±1               | 1.0      |
|         | 132321 | 1744.9    | QPSK  | 1                | 0            | 22.45               | 22.0±1               | /        |
|         |        |           |       | 1                | 49           | 22.47               | 22.0±1               | /        |
|         |        |           |       | 1                | 99           | 22.27               | 22.0±1               | /        |
|         |        |           |       | 36               | 0            | 21.6                | 22.0±1               | 1.0      |
|         |        |           |       | 36               | 24           | 21.55               | 22.0±1               | 1.0      |
|         |        |           |       | 36               | 49           | 21.45               | 22.0±1               | 1.0      |
|         |        |           |       | 75               | 0            | 21.53               | 22.0±1               | 1.0      |
|         |        |           | 16QAM | 1                | 0            | 21.81               | 21.0±1               | 1.0      |
|         |        |           |       | 1                | 49           | 21.81               | 21.0±1               | 1.0      |
|         |        |           |       | 1                | 99           | 21.65               | 21.0±1               | 1.0      |
|         |        |           |       | 36               | 0            | 20.52               | 21.0±1               | 1.0      |
|         |        |           |       | 36               | 24           | 20.56               | 21.0±1               | 1.0      |
|         |        |           |       | 36               | 49           | 20.48               | 21.0±1               | 1.0      |
|         |        |           |       | 75               | 0            | 20.53               | 21.0±1               | 1.0      |
|         | 132546 | 1767.4    | QPSK  | 1                | 0            | 22.28               | 22.0±1               | /        |
|         |        |           |       | 1                | 49           | 22.35               | 22.0±1               | /        |
| 1       |        |           |       | 99               | 22.27        | 22.0±1              | /                    |          |
| 36      |        |           |       | 0                | 21.36        | 22.0±1              | 1.0                  |          |
| 36      |        |           |       | 24               | 21.41        | 22.0±1              | 1.0                  |          |
| 36      |        |           |       | 49               | 21.44        | 22.0±1              | 1.0                  |          |
| 75      |        |           |       | 0                | 21.38        | 22.0±1              | 1.0                  |          |
| 16QAM   |        |           | 1     | 0                | 21.63        | 21.0±1              | 1.0                  |          |
|         |        |           | 1     | 49               | 21.75        | 21.0±1              | 1.0                  |          |
|         |        |           | 1     | 99               | 21.7         | 21.0±1              | 1.0                  |          |
|         |        |           | 36    | 0                | 20.33        | 21.0±1              | 1.0                  |          |
|         |        |           | 36    | 24               | 20.38        | 21.0±1              | 1.0                  |          |
|         |        |           | 36    | 49               | 20.37        | 21.0±1              | 1.0                  |          |
|         |        |           | 75    | 0                | 20.37        | 21.0±1              | 1.0                  |          |

| BW(MHz) | Ch     | Freq(MHz) | Mode  | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|--------|-----------|-------|------------------|--------------|---------------------|----------------------|----------|
| 20MHz   | 132072 | 1720      | QPSK  | 1                | 0            | 22.4                | 22.0±1               | /        |
|         |        |           |       | 1                | 49           | 22.72               | 22.0±1               | /        |
|         |        |           |       | 1                | 99           | 22.44               | 22.0±1               | /        |
|         |        |           |       | 50               | 0            | 21.52               | 22.0±1               | 1.0      |
|         |        |           |       | 50               | 24           | 21.53               | 22.0±1               | 1.0      |
|         |        |           |       | 50               | 49           | 21.54               | 22.0±1               | 1.0      |
|         |        |           |       | 100              | 0            | 21.54               | 22.0±1               | 1.0      |
|         |        |           | 16QAM | 1                | 0            | 21.91               | 21.5±1               | 1.0      |
|         |        |           |       | 1                | 49           | 22.24               | 21.5±1               | 1.0      |
|         |        |           |       | 1                | 99           | 21.98               | 21.5±1               | 1.0      |
|         |        |           |       | 50               | 0            | 20.56               | 21.5±1               | 1.0      |
|         |        |           |       | 50               | 24           | 20.6                | 21.5±1               | 1.0      |
|         |        |           |       | 50               | 49           | 20.63               | 21.5±1               | 1.0      |
|         |        |           |       | 100              | 0            | 20.59               | 21.5±1               | 1.0      |
|         | 132321 | 1744.9    | QPSK  | 1                | 0            | 22.43               | 22.0±1               | /        |
|         |        |           |       | 1                | 49           | 22.66               | 22.0±1               | /        |
|         |        |           |       | 1                | 99           | 22.29               | 22.0±1               | /        |
|         |        |           |       | 50               | 0            | 21.51               | 22.0±1               | 1.0      |
|         |        |           |       | 50               | 24           | 21.49               | 22.0±1               | 1.0      |
|         |        |           |       | 50               | 49           | 21.33               | 22.0±1               | 1.0      |
|         |        |           |       | 100              | 0            | 21.44               | 22.0±1               | 1.0      |
|         |        |           | 16QAM | 1                | 0            | 21.87               | 21.3±1               | 1.0      |
|         |        |           |       | 1                | 49           | 22.04               | 21.3±1               | 1.0      |
|         |        |           |       | 1                | 99           | 21.68               | 21.3±1               | 1.0      |
|         |        |           |       | 50               | 0            | 20.57               | 21.3±1               | 1.0      |
|         |        |           |       | 50               | 24           | 20.51               | 21.3±1               | 1.0      |
|         |        |           |       | 50               | 49           | 20.4                | 21.3±1               | 1.0      |
|         |        |           |       | 100              | 0            | 20.47               | 21.3±1               | 1.0      |
|         | 132471 | 1759.9    | QPSK  | 1                | 0            | 22.09               | 22.0±1               | /        |
|         |        |           |       | 1                | 49           | 22.44               | 22.0±1               | /        |
| 1       |        |           |       | 99               | 22.16        | 22.0±1              | /                    |          |
| 50      |        |           |       | 0                | 21.38        | 22.0±1              | 1.0                  |          |
| 50      |        |           |       | 24               | 21.35        | 22.0±1              | 1.0                  |          |
| 50      |        |           |       | 49               | 21.32        | 22.0±1              | 1.0                  |          |
| 100     |        |           |       | 0                | 21.34        | 22.0±1              | 1.0                  |          |
| 16QAM   |        |           | 1     | 0                | 21.48        | 21.0±1              | 1.0                  |          |
|         |        |           | 1     | 49               | 21.88        | 21.0±1              | 1.0                  |          |
|         |        |           | 1     | 99               | 21.58        | 21.0±1              | 1.0                  |          |
|         |        |           | 50    | 0                | 20.37        | 21.0±1              | 1.0                  |          |
|         |        |           | 50    | 24               | 20.37        | 21.0±1              | 1.0                  |          |
|         |        |           | 50    | 49               | 20.36        | 21.0±1              | 1.0                  |          |
|         |        |           | 100   | 0                | 20.39        | 21.0±1              | 1.0                  |          |

**ERP and EIRP  
LTE Band 2**

| Frequency                                 | Receiver Reading | Turn table Angle | RX Antenna |       | Substituted |       |              | Absolute Level | Part 24E |        |
|---|------------------|------------------|------------|-------|-------------|-------|--------------|----------------|----------|--------|
|   |                  |                  | Height     | Polar | SG Level    | Cable | Antenna Gain |                | Limit    | Margin |
| (MHz)                                     | (dBμV)           | Degree           | (m)        | (H/V) | (dBm)       | (dB)  | (dB)         | (dBm)          | (dBm)    | (dB)   |
| LTE Band 2 Channel 18607 – 1.4MHz – QPSK  |                  |                  |            |       |             |       |              |                |          |        |
| 1850.70                                   | 82.10            | 141              | 1.6        | H     | 8.13        | 0.31  | 10.40        | 18.22          | 33       | -14.78 |
| 1850.70                                   | 82.27            | 342              | 1.6        | V     | 8.99        | 0.31  | 10.40        | 19.08          | 33       | -13.92 |
| LTE Band 2 Channel 18900 – 1.4MHz – QPSK  |                  |                  |            |       |             |       |              |                |          |        |
| 1880.00                                   | 82.12            | 342              | 1.3        | H     | 8.27        | 0.31  | 10.40        | 18.36          | 33       | -14.64 |
| 1880.00                                   | 82.18            | 79               | 1.7        | V     | 9.06        | 0.31  | 10.40        | 19.15          | 33       | -13.85 |
| LTE Band 2 Channel 19193 – 1.4MHz – QPSK  |                  |                  |            |       |             |       |              |                |          |        |
| 1909.30                                   | 81.78            | 209              | 1.2        | H     | 8.05        | 0.32  | 10.40        | 18.13          | 33       | -14.87 |
| 1909.30                                   | 82.04            | 273              | 1.3        | V     | 9.08        | 0.32  | 10.40        | 19.16          | 33       | -13.84 |
| LTE Band 2 Channel 18607 – 1.4MHz – 16QAM |                  |                  |            |       |             |       |              |                |          |        |
| 1850.70                                   | 81.87            | 24               | 1.4        | H     | 7.90        | 0.31  | 10.40        | 17.99          | 33       | -15.01 |
| 1850.70                                   | 82.27            | 233              | 1.5        | V     | 8.99        | 0.31  | 10.40        | 19.08          | 33       | -13.92 |
| LTE Band 2 Channel 18900 – 1.4MHz – 16QAM |                  |                  |            |       |             |       |              |                |          |        |
| 1880.00                                   | 81.81            | 334              | 2.4        | H     | 7.96        | 0.31  | 10.40        | 18.05          | 33       | -14.95 |
| 1880.00                                   | 82.13            | 56               | 2.1        | V     | 9.01        | 0.31  | 10.40        | 19.10          | 33       | -13.90 |
| LTE Band 2 Channel 19193 – 1.4MHz – 16QAM |                  |                  |            |       |             |       |              |                |          |        |
| 1909.30                                   | 82.31            | 165              | 1.1        | H     | 8.58        | 0.32  | 10.40        | 18.66          | 33       | -14.34 |
| 1909.30                                   | 81.97            | 263              | 1.1        | V     | 9.01        | 0.32  | 10.40        | 19.09          | 33       | -13.91 |
| LTE Band 2 Channel 18615 – 3MHz – QPSK    |                  |                  |            |       |             |       |              |                |          |        |
| 1851.50                                   | 81.88            | 275              | 2.1        | H     | 7.91        | 0.31  | 10.40        | 18.00          | 33       | -15.00 |
| 1851.50                                   | 82.19            | 0                | 1.6        | V     | 8.91        | 0.31  | 10.40        | 19.00          | 33       | -14.00 |
| LTE Band 2 Channel 18900 – 3MHz – QPSK    |                  |                  |            |       |             |       |              |                |          |        |
| 1880.00                                   | 82.19            | 151              | 2.3        | H     | 8.34        | 0.31  | 10.40        | 18.43          | 33       | -14.57 |
| 1880.00                                   | 81.88            | 297              | 2.1        | V     | 8.76        | 0.31  | 10.40        | 18.85          | 33       | -14.15 |
| LTE Band 2 Channel 19185 – 3MHz – QPSK    |                  |                  |            |       |             |       |              |                |          |        |
| 1908.50                                   | 81.97            | 165              | 1.3        | H     | 8.24        | 0.32  | 10.40        | 18.32          | 33       | -14.68 |
| 1908.50                                   | 82.06            | 312              | 1.5        | V     | 9.10        | 0.32  | 10.40        | 19.18          | 33       | -13.82 |
| LTE Band 2 Channel 18615 – 3MHz – 16QAM   |                  |                  |            |       |             |       |              |                |          |        |
| 1851.50                                   | 81.92            | 148              | 1.7        | H     | 7.95        | 0.31  | 10.40        | 18.04          | 33       | -14.96 |
| 1851.50                                   | 82.18            | 242              | 1.6        | V     | 8.90        | 0.31  | 10.40        | 18.99          | 33       | -14.01 |



| LTE Band 2 Channel 18900 – 3MHz – 16QAM  |       |     |     |   |      |      |       |       |    |        |
|--|-------|-----|-----|---|------|------|-------|-------|----|--------|
| 1880.00                                  | 82.44 | 18  | 1.9 | H | 8.59 | 0.31 | 10.40 | 18.68 | 33 | -14.32 |
| 1880.00                                  | 82.58 | 312 | 1.3 | V | 9.46 | 0.31 | 10.40 | 19.55 | 33 | -13.45 |
| LTE Band 2 Channel 19185 – 3MHz – 16QAM  |       |     |     |   |      |      |       |       |    |        |
| 1908.50                                  | 82.24 | 120 | 2.0 | H | 8.51 | 0.32 | 10.40 | 18.59 | 33 | -14.41 |
| 1908.50                                  | 82.34 | 140 | 1.9 | V | 9.38 | 0.32 | 10.40 | 19.46 | 33 | -13.54 |
| LTE Band 2 Channel 18625 – 5MHz – QPSK   |       |     |     |   |      |      |       |       |    |        |
| 1852.50                                  | 82.02 | 12  | 1.5 | H | 8.05 | 0.31 | 10.40 | 18.14 | 33 | -14.86 |
| 1852.50                                  | 82.16 | 125 | 2.1 | V | 8.88 | 0.31 | 10.40 | 18.97 | 33 | -14.03 |
| LTE Band 2 Channel 18900 – 5MHz – QPSK   |       |     |     |   |      |      |       |       |    |        |
| 1880.00                                  | 82.35 | 346 | 1.9 | H | 8.50 | 0.31 | 10.40 | 18.59 | 33 | -14.41 |
| 1880.00                                  | 82.49 | 144 | 1.2 | V | 9.37 | 0.31 | 10.40 | 19.46 | 33 | -13.54 |
| LTE Band 2 Channel 19175 – 5MHz – QPSK   |       |     |     |   |      |      |       |       |    |        |
| 1907.50                                  | 81.77 | 347 | 2.2 | H | 8.04 | 0.32 | 10.40 | 18.12 | 33 | -14.88 |
| 1907.50                                  | 82.17 | 290 | 1.8 | V | 9.21 | 0.32 | 10.40 | 19.29 | 33 | -13.71 |
| LTE Band 2 Channel 18625 – 5MHz – 16QAM  |       |     |     |   |      |      |       |       |    |        |
| 1852.50                                  | 81.98 | 50  | 1.5 | H | 8.01 | 0.31 | 10.40 | 18.10 | 33 | -14.90 |
| 1852.50                                  | 81.72 | 226 | 1.5 | V | 8.44 | 0.31 | 10.40 | 18.53 | 33 | -14.47 |
| LTE Band 2 Channel 18900 – 5MHz – 16QAM  |       |     |     |   |      |      |       |       |    |        |
| 1880.00                                  | 82.05 | 322 | 1.5 | H | 8.20 | 0.31 | 10.40 | 18.29 | 33 | -14.71 |
| 1880.00                                  | 81.76 | 70  | 2.2 | V | 8.64 | 0.31 | 10.40 | 18.73 | 33 | -14.27 |
| LTE Band 2 Channel 19175 – 5MHz – 16QAM  |       |     |     |   |      |      |       |       |    |        |
| 1907.50                                  | 82.06 | 47  | 1.1 | H | 8.33 | 0.32 | 10.40 | 18.41 | 33 | -14.59 |
| 1907.50                                  | 81.78 | 114 | 1.7 | V | 8.82 | 0.32 | 10.40 | 18.90 | 33 | -14.10 |
| LTE Band 2 Channel 18650 – 10MHz – QPSK  |       |     |     |   |      |      |       |       |    |        |
| 1855.00                                  | 82.02 | 57  | 1.1 | H | 8.05 | 0.31 | 10.40 | 18.14 | 33 | -14.86 |
| 1855.00                                  | 82.26 | 291 | 1.2 | V | 8.98 | 0.31 | 10.40 | 19.07 | 33 | -13.93 |
| LTE Band 2 Channel 18900 – 10MHz – QPSK  |       |     |     |   |      |      |       |       |    |        |
| 1880.00                                  | 82.24 | 109 | 2.3 | H | 8.39 | 0.31 | 10.40 | 18.48 | 33 | -14.52 |
| 1880.00                                  | 82.04 | 68  | 2.5 | V | 8.92 | 0.31 | 10.40 | 19.01 | 33 | -13.99 |
| LTE Band 2 Channel 19150 – 10MHz – QPSK  |       |     |     |   |      |      |       |       |    |        |
| 1905.00                                  | 82.52 | 205 | 1.4 | H | 8.79 | 0.32 | 10.40 | 18.87 | 33 | -14.13 |
| 1905.00                                  | 82.11 | 34  | 1.2 | V | 9.15 | 0.32 | 10.40 | 19.23 | 33 | -13.77 |
| LTE Band 2 Channel 18650 – 10MHz – 16QAM |       |     |     |   |      |      |       |       |    |        |

|  |       |     |     |   |       |      |       |       |    |        |
|--|-------|-----|-----|---|-------|------|-------|-------|----|--------|
| 1855.00                                  | 81.88 | 177 | 1.8 | H | 7.91  | 0.31 | 10.40 | 18.00 | 33 | -15.00 |
| 1855.00                                  | 82.30 | 55  | 1.6 | V | 9.02  | 0.31 | 10.40 | 19.11 | 33 | -13.89 |
| LTE Band 2 Channel 18900 – 10MHz – 16QAM |       |     |     |   |       |      |       |       |    |        |
| 1880.00                                  | 82.22 | 83  | 2.3 | H | 8.37  | 0.31 | 10.40 | 18.46 | 33 | -14.54 |
| 1880.00                                  | 81.97 | 67  | 1.1 | V | 8.85  | 0.31 | 10.40 | 18.94 | 33 | -14.06 |
| LTE Band 2 Channel 19150 – 10MHz – 16QAM |       |     |     |   |       |      |       |       |    |        |
| 1905.00                                  | 81.86 | 176 | 1.5 | H | 8.13  | 0.32 | 10.40 | 18.21 | 33 | -14.79 |
| 1905.00                                  | 82.16 | 351 | 2.0 | V | 9.20  | 0.32 | 10.40 | 19.28 | 33 | -13.72 |
| LTE Band 2 Channel 18675 – 15MHz – QPSK  |       |     |     |   |       |      |       |       |    |        |
| 1857.50                                  | 82.15 | 62  | 1.5 | H | 8.18  | 0.31 | 10.40 | 18.27 | 33 | -14.73 |
| 1857.50                                  | 82.29 | 188 | 2.0 | V | 9.01  | 0.31 | 10.40 | 19.10 | 33 | -13.90 |
| LTE Band 2 Channel 18900 – 15MHz – QPSK  |       |     |     |   |       |      |       |       |    |        |
| 1880.00                                  | 82.12 | 57  | 2.4 | H | 8.27  | 0.31 | 10.40 | 18.36 | 33 | -14.64 |
| 1880.00                                  | 82.12 | 304 | 2.3 | V | 9.00  | 0.31 | 10.40 | 19.09 | 33 | -13.91 |
| LTE Band 2 Channel 19125 – 15MHz – QPSK  |       |     |     |   |       |      |       |       |    |        |
| 1902.50                                  | 82.09 | 142 | 2.2 | H | 8.36  | 0.32 | 10.40 | 18.44 | 33 | -14.56 |
| 1902.50                                  | 82.05 | 18  | 1.9 | V | 9.09  | 0.32 | 10.40 | 19.17 | 33 | -13.83 |
| LTE Band 2 Channel 18675 – 15MHz – 16QAM |       |     |     |   |       |      |       |       |    |        |
| 1857.50                                  | 81.91 | 124 | 2.3 | H | 7.94  | 0.31 | 10.40 | 18.03 | 33 | -14.97 |
| 1857.50                                  | 81.92 | 314 | 2.0 | V | 8.64  | 0.31 | 10.40 | 18.73 | 33 | -14.27 |
| LTE Band 2 Channel 18900 – 15MHz – 16QAM |       |     |     |   |       |      |       |       |    |        |
| 1880.00                                  | 81.97 | 125 | 1.4 | H | 8.12  | 0.31 | 10.40 | 18.21 | 33 | -14.79 |
| 1880.00                                  | 82.13 | 327 | 2.2 | V | 9.01  | 0.31 | 10.40 | 19.10 | 33 | -13.90 |
| LTE Band 2 Channel 19125 – 15MHz – 16QAM |       |     |     |   |       |      |       |       |    |        |
| 1902.50                                  | 81.66 | 57  | 1.1 | H | 7.93  | 0.32 | 10.40 | 18.01 | 33 | -14.99 |
| 1902.50                                  | 82.11 | 187 | 2.5 | V | 9.15  | 0.32 | 10.40 | 19.23 | 33 | -13.77 |
| LTE Band 2 Channel 18700 – 20MHz – QPSK  |       |     |     |   |       |      |       |       |    |        |
| 1860.00                                  | 84.70 | 280 | 1.3 | H | 10.73 | 0.31 | 10.40 | 20.82 | 33 | -12.18 |
| 1860.00                                  | 84.00 | 332 | 1.4 | V | 10.72 | 0.31 | 10.40 | 20.81 | 33 | -12.19 |
| LTE Band 2 Channel 18900 – 20MHz – QPSK  |       |     |     |   |       |      |       |       |    |        |
| 1880.00                                  | 84.79 | 202 | 1.2 | H | 10.94 | 0.31 | 10.40 | 21.03 | 33 | -11.97 |
| 1880.00                                  | 84.10 | 206 | 1.6 | V | 10.98 | 0.31 | 10.40 | 21.07 | 33 | -11.93 |
| LTE Band 2 Channel 19100 – 20MHz – QPSK  |       |     |     |   |       |      |       |       |    |        |
| 1900.00                                  | 84.69 | 299 | 2.3 | H | 10.96 | 0.32 | 10.40 | 21.04 | 33 | -11.96 |

|  |       |     |     |   |       |      |       |              |    |        |
|--|-------|-----|-----|---|-------|------|-------|--------------|----|--------|
| 1900.00                                  | 84.12 | 94  | 1.6 | V | 11.16 | 0.32 | 10.40 | <b>21.24</b> | 33 | -11.76 |
| LTE Band 2 Channel 18670 – 20MHz – 16QAM |       |     |     |   |       |      |       |              |    |        |
| 1860.00                                  | 84.62 | 349 | 1.4 | H | 10.65 | 0.31 | 10.40 | 20.74        | 33 | -12.26 |
| 1860.00                                  | 84.23 | 354 | 1.7 | V | 10.95 | 0.31 | 10.40 | 21.04        | 33 | -11.96 |
| LTE Band 2 Channel 18900 – 20MHz – 16QAM |       |     |     |   |       |      |       |              |    |        |
| 1880.00                                  | 84.66 | 86  | 2.1 | H | 10.81 | 0.31 | 10.40 | 20.90        | 33 | -12.10 |
| 1880.00                                  | 84.01 | 345 | 1.5 | V | 10.89 | 0.31 | 10.40 | 20.98        | 33 | -12.02 |
| LTE Band 2 Channel 19100 – 20MHz – 16QAM |       |     |     |   |       |      |       |              |    |        |
| 1900.00                                  | 84.56 | 51  | 1.1 | H | 10.83 | 0.32 | 10.40 | 20.91        | 33 | -12.09 |
| 1900.00                                  | 84.00 | 183 | 1.6 | V | 11.04 | 0.32 | 10.40 | <b>21.12</b> | 33 | -11.88 |

**LTE Band 4**

| Frequency<br>(MHz)                        | Receiver<br>Reading<br>(dBμV) | Turn<br>table<br>Angle<br>Degree | RX Antenna    |                | Substituted          |               |                         | Absolute<br>Level<br>(dBm) | Part 27        |                |
|---|-------------------------------|----------------------------------|---------------|----------------|----------------------|---------------|-------------------------|----------------------------|----------------|----------------|
|   |                               |                                  | Height<br>(m) | Polar<br>(H/V) | SG<br>Level<br>(dBm) | Cable<br>(dB) | Antenna<br>Gain<br>(dB) |                            | Limit<br>(dBm) | Margin<br>(dB) |
| LTE Band 4 Channel 19957 – 1.4MHz – QPSK  |                               |                                  |               |                |                      |               |                         |                            |                |                |
| 1710.70                                   | 82.70                         | 125                              | 1.6           | H              | 8.59                 | 0.30          | 9.40                    | 17.69                      | 30             | -12.31         |
| 1710.70                                   | 83.07                         | 151                              | 1.2           | V              | 9.54                 | 0.30          | 9.40                    | 18.64                      | 30             | -11.36         |
| LTE Band 4 Channel 20175 – 1.4MHz – QPSK  |                               |                                  |               |                |                      |               |                         |                            |                |                |
| 1732.50                                   | 82.87                         | 5                                | 1.3           | H              | 8.76                 | 0.30          | 9.40                    | 17.86                      | 30             | -12.14         |
| 1732.50                                   | 82.95                         | 313                              | 1.2           | V              | 9.42                 | 0.30          | 9.40                    | 18.52                      | 30             | -11.48         |
| LTE Band 4 Channel 20393 – 1.4MHz – QPSK  |                               |                                  |               |                |                      |               |                         |                            |                |                |
| 1754.30                                   | 82.67                         | 11                               | 1.3           | H              | 8.56                 | 0.30          | 9.40                    | 17.66                      | 30             | -12.34         |
| 1754.30                                   | 82.48                         | 329                              | 1.9           | V              | 8.95                 | 0.30          | 9.40                    | 18.05                      | 30             | -11.95         |
| LTE Band 4 Channel 19957 – 1.4MHz – 16QAM |                               |                                  |               |                |                      |               |                         |                            |                |                |
| 1710.70                                   | 82.40                         | 319                              | 2.4           | H              | 8.29                 | 0.30          | 9.40                    | 17.39                      | 30             | -12.61         |
| 1710.70                                   | 82.67                         | 199                              | 1.3           | V              | 9.14                 | 0.30          | 9.40                    | 18.24                      | 30             | -11.76         |
| LTE Band 4 Channel 20175 – 1.4MHz – 16QAM |                               |                                  |               |                |                      |               |                         |                            |                |                |
| 1732.50                                   | 82.98                         | 306                              | 1.9           | H              | 8.87                 | 0.30          | 9.40                    | 17.97                      | 30             | -12.03         |
| 1732.50                                   | 82.53                         | 271                              | 1.9           | V              | 9.00                 | 0.30          | 9.40                    | 18.10                      | 30             | -11.90         |
| LTE Band 4 Channel 20393 – 1.4MHz – 16QAM |                               |                                  |               |                |                      |               |                         |                            |                |                |
| 1754.30                                   | 82.96                         | 295                              | 2.1           | H              | 8.85                 | 0.30          | 9.40                    | 17.95                      | 30             | -12.05         |
| 1754.30                                   | 82.60                         | 192                              | 1.0           | V              | 9.07                 | 0.30          | 9.40                    | 18.17                      | 30             | -11.83         |
| LTE Band 4 Channel 19965 – 3MHz – QPSK    |                               |                                  |               |                |                      |               |                         |                            |                |                |
| 1711.50                                   | 82.95                         | 287                              | 2.1           | H              | 8.84                 | 0.30          | 9.40                    | 17.94                      | 30             | -12.06         |
| 1711.50                                   | 82.64                         | 46                               | 2.1           | V              | 9.11                 | 0.30          | 9.40                    | 18.21                      | 30             | -11.79         |
| LTE Band 4 Channel 20175 – 3MHz – QPSK    |                               |                                  |               |                |                      |               |                         |                            |                |                |
| 1732.50                                   | 82.64                         | 323                              | 1.0           | H              | 8.53                 | 0.30          | 9.40                    | 17.63                      | 30             | -12.37         |
| 1732.50                                   | 82.64                         | 214                              | 2.1           | V              | 9.11                 | 0.30          | 9.40                    | 18.21                      | 30             | -11.79         |
| LTE Band 4 Channel 20385 – 3MHz – QPSK    |                               |                                  |               |                |                      |               |                         |                            |                |                |
| 1753.50                                   | 83.08                         | 337                              | 2.4           | H              | 8.97                 | 0.30          | 9.40                    | 18.07                      | 30             | -11.93         |
| 1753.50                                   | 83.09                         | 272                              | 1.6           | V              | 9.56                 | 0.30          | 9.40                    | 18.66                      | 30             | -11.34         |
| LTE Band 4 Channel 19965 – 3MHz – 16QAM   |                               |                                  |               |                |                      |               |                         |                            |                |                |
| 1711.50                                   | 82.55                         | 347                              | 1.2           | H              | 8.44                 | 0.30          | 9.40                    | 17.54                      | 30             | -12.46         |
| 1711.50                                   | 82.61                         | 270                              | 1.8           | V              | 9.08                 | 0.30          | 9.40                    | 18.18                      | 30             | -11.82         |

| LTE Band 4 Channel 20175 – 3MHz – 16QAM  |       |     |     |   |      |      |      |       |    |        |
|--|-------|-----|-----|---|------|------|------|-------|----|--------|
| 1732.50                                  | 82.91 | 299 | 2.2 | H | 8.80 | 0.30 | 9.40 | 17.90 | 30 | -12.10 |
| 1732.50                                  | 82.64 | 356 | 2.0 | V | 9.11 | 0.30 | 9.40 | 18.21 | 30 | -11.79 |
| LTE Band 4 Channel 20385 – 3MHz – 16QAM  |       |     |     |   |      |      |      |       |    |        |
| 1753.50                                  | 82.91 | 280 | 1.7 | H | 8.80 | 0.30 | 9.40 | 17.90 | 30 | -12.10 |
| 1753.50                                  | 82.53 | 46  | 1.9 | V | 9.00 | 0.30 | 9.40 | 18.10 | 30 | -11.90 |
| LTE Band 4 Channel 19975 – 5MHz – QPSK   |       |     |     |   |      |      |      |       |    |        |
| 1712.50                                  | 82.65 | 31  | 1.2 | H | 8.54 | 0.30 | 9.40 | 17.64 | 30 | -12.36 |
| 1712.50                                  | 82.89 | 296 | 1.9 | V | 9.36 | 0.30 | 9.40 | 18.46 | 30 | -11.54 |
| LTE Band 4 Channel 20175 – 5MHz – QPSK   |       |     |     |   |      |      |      |       |    |        |
| 1732.50                                  | 82.87 | 73  | 1.6 | H | 8.76 | 0.30 | 9.40 | 17.86 | 30 | -12.14 |
| 1732.50                                  | 82.67 | 204 | 1.6 | V | 9.14 | 0.30 | 9.40 | 18.24 | 30 | -11.76 |
| LTE Band 4 Channel 20375 – 5MHz – QPSK   |       |     |     |   |      |      |      |       |    |        |
| 1752.50                                  | 82.87 | 158 | 1.5 | H | 8.76 | 0.30 | 9.40 | 17.86 | 30 | -12.14 |
| 1752.50                                  | 82.91 | 225 | 2.1 | V | 9.38 | 0.30 | 9.40 | 18.48 | 30 | -11.52 |
| LTE Band 4 Channel 19975 – 5MHz – 16QAM  |       |     |     |   |      |      |      |       |    |        |
| 1712.50                                  | 83.04 | 185 | 2.2 | H | 8.93 | 0.30 | 9.40 | 18.03 | 30 | -11.97 |
| 1712.50                                  | 82.22 | 327 | 2.1 | V | 8.69 | 0.30 | 9.40 | 17.79 | 30 | -12.21 |
| LTE Band 4 Channel 20175 – 5MHz – 16QAM  |       |     |     |   |      |      |      |       |    |        |
| 1732.50                                  | 82.69 | 76  | 1.3 | H | 8.58 | 0.30 | 9.40 | 17.68 | 30 | -12.32 |
| 1732.50                                  | 82.84 | 180 | 1.3 | V | 9.31 | 0.30 | 9.40 | 18.41 | 30 | -11.59 |
| LTE Band 4 Channel 20375 – 5MHz – 16QAM  |       |     |     |   |      |      |      |       |    |        |
| 1752.50                                  | 82.68 | 293 | 2.0 | H | 8.57 | 0.30 | 9.40 | 17.67 | 30 | -12.33 |
| 1752.50                                  | 82.66 | 174 | 1.5 | V | 9.13 | 0.30 | 9.40 | 18.23 | 30 | -11.77 |
| LTE Band 4 Channel 20000 – 10MHz – QPSK  |       |     |     |   |      |      |      |       |    |        |
| 1715.00                                  | 83.09 | 292 | 2.2 | H | 8.98 | 0.30 | 9.40 | 18.08 | 30 | -11.92 |
| 1715.00                                  | 82.72 | 19  | 2.4 | V | 9.19 | 0.30 | 9.40 | 18.29 | 30 | -11.71 |
| LTE Band 4 Channel 20175 – 10MHz – QPSK  |       |     |     |   |      |      |      |       |    |        |
| 1732.50                                  | 82.71 | 182 | 1.6 | H | 8.60 | 0.30 | 9.40 | 17.70 | 30 | -12.30 |
| 1732.50                                  | 82.64 | 134 | 1.4 | V | 9.11 | 0.30 | 9.40 | 18.21 | 30 | -11.79 |
| LTE Band 4 Channel 20350 – 10MHz – QPSK  |       |     |     |   |      |      |      |       |    |        |
| 1750.00                                  | 82.26 | 70  | 2.1 | H | 8.15 | 0.30 | 9.40 | 17.25 | 30 | -12.75 |
| 1750.00                                  | 82.85 | 204 | 1.7 | V | 9.32 | 0.30 | 9.40 | 18.42 | 30 | -11.58 |
| LTE Band 4 Channel 20000 – 10MHz – 16QAM |       |     |     |   |      |      |      |       |    |        |

|  |       |     |     |   |       |      |      |       |    |        |
|--|-------|-----|-----|---|-------|------|------|-------|----|--------|
| 1715.00                                  | 82.73 | 293 | 1.7 | H | 8.62  | 0.30 | 9.40 | 17.72 | 30 | -12.28 |
| 1715.00                                  | 82.90 | 119 | 1.2 | V | 9.37  | 0.30 | 9.40 | 18.47 | 30 | -11.53 |
| LTE Band 4 Channel 20175 – 10MHz – 16QAM |       |     |     |   |       |      |      |       |    |        |
| 1732.50                                  | 83.18 | 258 | 2.5 | H | 9.07  | 0.30 | 9.40 | 18.17 | 30 | -11.83 |
| 1732.50                                  | 82.67 | 288 | 2.1 | V | 9.14  | 0.30 | 9.40 | 18.24 | 30 | -11.76 |
| LTE Band 4 Channel 20350 – 10MHz – 16QAM |       |     |     |   |       |      |      |       |    |        |
| 1750.00                                  | 82.51 | 86  | 2.2 | H | 8.40  | 0.30 | 9.40 | 17.50 | 30 | -12.50 |
| 1750.00                                  | 82.88 | 154 | 1.6 | V | 9.35  | 0.30 | 9.40 | 18.45 | 30 | -11.55 |
| LTE Band 4 Channel 20025 – 15MHz – QPSK  |       |     |     |   |       |      |      |       |    |        |
| 1717.50                                  | 82.68 | 82  | 1.7 | H | 8.57  | 0.30 | 9.40 | 17.67 | 30 | -12.33 |
| 1717.50                                  | 82.82 | 350 | 1.3 | V | 9.29  | 0.30 | 9.40 | 18.39 | 30 | -11.61 |
| LTE Band 4 Channel 20175 – 15MHz – QPSK  |       |     |     |   |       |      |      |       |    |        |
| 1732.50                                  | 82.75 | 334 | 1.1 | H | 8.64  | 0.30 | 9.40 | 17.74 | 30 | -12.26 |
| 1732.50                                  | 82.67 | 222 | 1.6 | V | 9.14  | 0.30 | 9.40 | 18.24 | 30 | -11.76 |
| LTE Band 4 Channel 20325 – 15MHz – QPSK  |       |     |     |   |       |      |      |       |    |        |
| 1747.50                                  | 82.94 | 172 | 1.3 | H | 8.83  | 0.30 | 9.40 | 17.93 | 30 | -12.07 |
| 1747.50                                  | 82.48 | 324 | 1.6 | V | 8.95  | 0.30 | 9.40 | 18.05 | 30 | -11.95 |
| LTE Band 4 Channel 20025 – 15MHz – 16QAM |       |     |     |   |       |      |      |       |    |        |
| 1717.50                                  | 82.96 | 303 | 2.3 | H | 8.85  | 0.30 | 9.40 | 17.95 | 30 | -12.05 |
| 1717.50                                  | 82.75 | 34  | 1.4 | V | 9.22  | 0.30 | 9.40 | 18.32 | 30 | -11.68 |
| LTE Band 4 Channel 20175 – 15MHz – 16QAM |       |     |     |   |       |      |      |       |    |        |
| 1732.50                                  | 82.59 | 173 | 1.6 | H | 8.48  | 0.30 | 9.40 | 17.58 | 30 | -12.42 |
| 1732.50                                  | 82.94 | 66  | 1.9 | V | 9.41  | 0.30 | 9.40 | 18.51 | 30 | -11.49 |
| LTE Band 4 Channel 20325 – 15MHz – 16QAM |       |     |     |   |       |      |      |       |    |        |
| 1747.50                                  | 82.47 | 307 | 2.3 | H | 8.36  | 0.30 | 9.40 | 17.46 | 30 | -12.54 |
| 1747.50                                  | 82.71 | 7   | 2.4 | V | 9.18  | 0.30 | 9.40 | 18.28 | 30 | -11.72 |
| LTE Band 4 Channel 20050 – 20MHz – QPSK  |       |     |     |   |       |      |      |       |    |        |
| 1720.00                                  | 85.10 | 82  | 1.3 | H | 10.99 | 0.30 | 9.40 | 20.09 | 30 | -9.91  |
| 1720.00                                  | 84.80 | 295 | 1.6 | V | 11.27 | 0.30 | 9.40 | 20.37 | 30 | -9.63  |
| LTE Band 4 Channel 20175 – 20MHz – QPSK  |       |     |     |   |       |      |      |       |    |        |
| 1732.50                                  | 85.14 | 33  | 1.5 | H | 11.03 | 0.30 | 9.40 | 20.13 | 30 | -9.87  |
| 1732.50                                  | 84.89 | 90  | 1.6 | V | 11.36 | 0.30 | 9.40 | 20.46 | 30 | -9.54  |
| LTE Band 4 Channel 20300 – 20MHz – QPSK  |       |     |     |   |       |      |      |       |    |        |
| 1745.00                                  | 85.24 | 178 | 2.4 | H | 11.13 | 0.30 | 9.40 | 20.23 | 30 | -9.77  |

|  |       |     |     |   |       |      |      |              |    |       |
|--|-------|-----|-----|---|-------|------|------|--------------|----|-------|
| 1745.00                                  | 84.93 | 96  | 1.4 | V | 11.40 | 0.30 | 9.40 | <b>20.50</b> | 30 | -9.50 |
| LTE Band 4 Channel 20050 – 20MHz – 16QAM |       |     |     |   |       |      |      |              |    |       |
| 1720.00                                  | 85.46 | 257 | 2.3 | H | 11.35 | 0.30 | 9.40 | 20.45        | 30 | -9.55 |
| 1720.00                                  | 84.99 | 176 | 2.1 | V | 11.46 | 0.30 | 9.40 | 20.56        | 30 | -9.44 |
| LTE Band 4 Channel 20175 – 20MHz – 16QAM |       |     |     |   |       |      |      |              |    |       |
| 1732.50                                  | 85.63 | 118 | 1.9 | H | 11.52 | 0.30 | 9.40 | 20.62        | 30 | -9.38 |
| 1732.50                                  | 84.97 | 37  | 1.6 | V | 11.44 | 0.30 | 9.40 | 20.54        | 30 | -9.46 |
| LTE Band 4 Channel 20300 – 20MHz – 16QAM |       |     |     |   |       |      |      |              |    |       |
| 1745.00                                  | 85.69 | 63  | 1.9 | H | 11.58 | 0.30 | 9.40 | <b>20.68</b> | 30 | -9.32 |
| 1745.00                                  | 85.00 | 191 | 1.2 | V | 11.47 | 0.30 | 9.40 | 20.57        | 30 | -9.43 |

**LTE Band 5**

| Frequency                                 | Receiver Reading | Turn table Angle | RX Antenna |       | Substituted |       |              | Absolute Level | Part 22H |        |
|---|------------------|------------------|------------|-------|-------------|-------|--------------|----------------|----------|--------|
|   |                  |                  | Height     | Polar | SG Level    | Cable | Antenna Gain |                | Limit    | Margin |
| (MHz)                                     | (dBμV)           | Degree           | (m)        | (H/V) | (dBm)       | (dB)  | (dB)         | (dBm)          | (dBm)    | (dB)   |
| LTE Band 5 Channel 20407 – 1.4MHz – QPSK  |                  |                  |            |       |             |       |              |                |          |        |
| 824.70                                    | 79.00            | 14               | 1.6        | H     | 11.89       | 0.30  | 9.40         | 20.99          | 38.45    | -17.46 |
| 824.70                                    | 79.06            | 183              | 1.3        | V     | 11.53       | 0.30  | 9.40         | 20.63          | 38.45    | -17.82 |
| LTE Band 5 Channel 20525 – 1.4MHz – QPSK  |                  |                  |            |       |             |       |              |                |          |        |
| 836.50                                    | 78.83            | 143              | 2.3        | H     | 11.72       | 0.30  | 9.40         | 20.82          | 38.45    | -17.63 |
| 836.50                                    | 79.13            | 297              | 2.1        | V     | 11.60       | 0.30  | 9.40         | 20.70          | 38.45    | -17.75 |
| LTE Band 5 Channel 20643 – 1.4MHz – QPSK  |                  |                  |            |       |             |       |              |                |          |        |
| 848.30                                    | 78.83            | 65               | 1.0        | H     | 11.72       | 0.30  | 9.40         | 20.82          | 38.45    | -17.63 |
| 848.30                                    | 78.77            | 4                | 1.8        | V     | 11.24       | 0.30  | 9.40         | 20.34          | 38.45    | -18.11 |
| LTE Band 5 Channel 20407 – 1.4MHz – 16QAM |                  |                  |            |       |             |       |              |                |          |        |
| 824.70                                    | 78.83            | 214              | 1.2        | H     | 11.72       | 0.30  | 9.40         | 20.82          | 38.45    | -17.63 |
| 824.70                                    | 78.82            | 263              | 2.3        | V     | 11.29       | 0.30  | 9.40         | 20.39          | 38.45    | -18.06 |
| LTE Band 5 Channel 20525 – 1.4MHz – 16QAM |                  |                  |            |       |             |       |              |                |          |        |
| 836.50                                    | 79.20            | 175              | 1.6        | H     | 12.09       | 0.30  | 9.40         | 21.19          | 38.45    | -17.26 |
| 836.50                                    | 79.08            | 15               | 1.9        | V     | 11.55       | 0.30  | 9.40         | 20.65          | 38.45    | -17.80 |
| LTE Band 5 Channel 20643 – 1.4MHz – 16QAM |                  |                  |            |       |             |       |              |                |          |        |
| 848.30                                    | 79.36            | 237              | 2.4        | H     | 12.25       | 0.30  | 9.40         | 21.35          | 38.45    | -17.10 |
| 848.30                                    | 79.07            | 74               | 1.3        | V     | 11.54       | 0.30  | 9.40         | 20.64          | 38.45    | -17.81 |
| LTE Band 5 Channel 20415 – 3MHz – QPSK    |                  |                  |            |       |             |       |              |                |          |        |
| 825.50                                    | 79.00            | 61               | 2.1        | H     | 11.89       | 0.30  | 9.40         | 20.99          | 38.45    | -17.46 |
| 825.50                                    | 79.28            | 234              | 1.8        | V     | 11.75       | 0.30  | 9.40         | 20.85          | 38.45    | -17.60 |
| LTE Band 5 Channel 20525 – 3MHz – QPSK    |                  |                  |            |       |             |       |              |                |          |        |
| 836.50                                    | 79.11            | 21               | 2.3        | H     | 12.00       | 0.30  | 9.40         | 21.10          | 38.45    | -17.35 |
| 836.50                                    | 79.02            | 60               | 2.2        | V     | 11.49       | 0.30  | 9.40         | 20.59          | 38.45    | -17.86 |
| LTE Band 5 Channel 20635 – 3MHz – QPSK    |                  |                  |            |       |             |       |              |                |          |        |
| 847.50                                    | 79.07            | 328              | 1.6        | H     | 11.96       | 0.30  | 9.40         | 21.06          | 38.45    | -17.39 |
| 847.50                                    | 78.79            | 79               | 1.8        | V     | 11.26       | 0.30  | 9.40         | 20.36          | 38.45    | -18.09 |
| LTE Band 5 Channel 20415 – 3MHz – 16QAM   |                  |                  |            |       |             |       |              |                |          |        |
| 825.50                                    | 78.97            | 326              | 2.5        | H     | 11.86       | 0.30  | 9.40         | 20.96          | 38.45    | -17.49 |
| 825.50                                    | 78.79            | 29               | 1.9        | V     | 11.26       | 0.30  | 9.40         | 20.36          | 38.45    | -18.09 |
| LTE Band 5 Channel 20525 – 3MHz – 16QAM   |                  |                  |            |       |             |       |              |                |          |        |



|  |       |     |     |   |       |      |      |              |       |        |
|--|-------|-----|-----|---|-------|------|------|--------------|-------|--------|
| 836.50                                   | 79.25 | 201 | 1.3 | H | 12.14 | 0.30 | 9.40 | 21.24        | 38.45 | -17.21 |
| 836.50                                   | 78.85 | 356 | 2.4 | V | 11.32 | 0.30 | 9.40 | 20.42        | 38.45 | -18.03 |
| LTE Band 5 Channel 20635 – 3MHz – 16QAM  |       |     |     |   |       |      |      |              |       |        |
| 847.50                                   | 79.02 | 131 | 1.2 | H | 11.91 | 0.30 | 9.40 | 21.01        | 38.45 | -17.44 |
| 847.50                                   | 79.28 | 27  | 1.6 | V | 11.75 | 0.30 | 9.40 | 20.85        | 38.45 | -17.60 |
| LTE Band 5 Channel 20425 – 5MHz – QPSK   |       |     |     |   |       |      |      |              |       |        |
| 826.50                                   | 78.73 | 255 | 2.4 | H | 11.62 | 0.30 | 9.40 | 20.72        | 38.45 | -17.73 |
| 826.50                                   | 78.97 | 289 | 2.1 | V | 11.44 | 0.30 | 9.40 | 20.54        | 38.45 | -17.91 |
| LTE Band 5 Channel 20525 – 5MHz – QPSK   |       |     |     |   |       |      |      |              |       |        |
| 836.50                                   | 78.93 | 155 | 2.4 | H | 11.82 | 0.30 | 9.40 | 20.92        | 38.45 | -17.53 |
| 836.50                                   | 79.27 | 29  | 1.4 | V | 11.74 | 0.30 | 9.40 | 20.84        | 38.45 | -17.61 |
| LTE Band 5 Channel 20625 – 5MHz – QPSK   |       |     |     |   |       |      |      |              |       |        |
| 846.50                                   | 79.07 | 251 | 2.1 | H | 11.96 | 0.30 | 9.40 | 21.06        | 38.45 | -17.39 |
| 846.50                                   | 78.66 | 307 | 1.8 | V | 11.13 | 0.30 | 9.40 | 20.23        | 38.45 | -18.22 |
| LTE Band 5 Channel 20425 – 5MHz – 16QAM  |       |     |     |   |       |      |      |              |       |        |
| 826.50                                   | 79.39 | 285 | 2.5 | H | 12.28 | 0.30 | 9.40 | 21.38        | 38.45 | -17.07 |
| 826.50                                   | 78.84 | 325 | 1.8 | V | 11.31 | 0.30 | 9.40 | 20.41        | 38.45 | -18.04 |
| LTE Band 5 Channel 20525 – 5MHz – 16QAM  |       |     |     |   |       |      |      |              |       |        |
| 836.50                                   | 78.64 | 18  | 1.3 | H | 11.53 | 0.30 | 9.40 | 20.63        | 38.45 | -17.82 |
| 836.50                                   | 78.86 | 81  | 2.0 | V | 11.33 | 0.30 | 9.40 | 20.43        | 38.45 | -18.02 |
| LTE Band 5 Channel 20625 – 5MHz – 16QAM  |       |     |     |   |       |      |      |              |       |        |
| 846.50                                   | 78.84 | 301 | 2.5 | H | 11.73 | 0.30 | 9.40 | 20.83        | 38.45 | -17.62 |
| 846.50                                   | 79.29 | 304 | 1.2 | V | 11.76 | 0.30 | 9.40 | 20.86        | 38.45 | -17.59 |
| LTE Band 5 Channel 20450 – 10MHz – QPSK  |       |     |     |   |       |      |      |              |       |        |
| 829.00                                   | 80.30 | 99  | 2.1 | H | 13.19 | 0.30 | 9.40 | 22.29        | 38.45 | -16.16 |
| 829.00                                   | 80.60 | 9   | 1.3 | V | 13.07 | 0.30 | 9.40 | 22.17        | 38.45 | -16.28 |
| LTE Band 5 Channel 20525 – 10MHz – QPSK  |       |     |     |   |       |      |      |              |       |        |
| 836.50                                   | 80.45 | 146 | 1.5 | H | 13.34 | 0.30 | 9.40 | 22.44        | 38.45 | -16.01 |
| 836.50                                   | 80.56 | 60  | 1.1 | V | 13.03 | 0.30 | 9.40 | 22.13        | 38.45 | -16.32 |
| LTE Band 5 Channel 20600 – 10MHz – QPSK  |       |     |     |   |       |      |      |              |       |        |
| 844.00                                   | 80.63 | 256 | 1.8 | H | 13.52 | 0.30 | 9.40 | <b>22.62</b> | 38.45 | -15.83 |
| 844.00                                   | 80.74 | 56  | 1.8 | V | 13.21 | 0.30 | 9.40 | 22.31        | 38.45 | -16.14 |
| LTE Band 5 Channel 20450 – 10MHz – 16QAM |       |     |     |   |       |      |      |              |       |        |
| 829.00                                   | 80.69 | 184 | 2.1 | H | 13.58 | 0.30 | 9.40 | 22.68        | 38.45 | -15.77 |

|  |       |     |     |   |       |      |      |              |       |        |
|--|-------|-----|-----|---|-------|------|------|--------------|-------|--------|
| 829.00                                   | 80.85 | 311 | 1.3 | V | 13.32 | 0.30 | 9.40 | 22.42        | 38.45 | -16.03 |
| LTE Band 5 Channel 20525 – 10MHz – 16QAM |       |     |     |   |       |      |      |              |       |        |
| 836.50                                   | 80.75 | 234 | 1.1 | H | 13.64 | 0.30 | 9.40 | 22.74        | 38.45 | -15.71 |
| 836.50                                   | 80.66 | 88  | 2.2 | V | 13.13 | 0.30 | 9.40 | 22.23        | 38.45 | -16.22 |
| LTE Band 5 Channel 20600 – 10MHz – 16QAM |       |     |     |   |       |      |      |              |       |        |
| 844.00                                   | 80.78 | 3   | 2.0 | H | 13.67 | 0.30 | 9.40 | <b>22.77</b> | 38.45 | -15.68 |
| 844.00                                   | 80.64 | 223 | 2.3 | V | 13.11 | 0.30 | 9.40 | 22.21        | 38.45 | -16.24 |

**LTE Band 7**

| Frequency<br>(MHz)                       | Receiver<br>Reading<br>(dBμV) | Turn<br>table<br>Angle<br>Degree | RX Antenna    |                | Substituted          |               |                         | Absolute<br>Level<br>(dBm) | Part 27        |                |
|--|-------------------------------|----------------------------------|---------------|----------------|----------------------|---------------|-------------------------|----------------------------|----------------|----------------|
|  |                               |                                  | Height<br>(m) | Polar<br>(H/V) | SG<br>Level<br>(dBm) | Cable<br>(dB) | Antenna<br>Gain<br>(dB) |                            | Limit<br>(dBm) | Margin<br>(dB) |
| LTE Band 7 Channel 20775 – 5MHz – QPSK   |                               |                                  |               |                |                      |               |                         |                            |                |                |
| 2502.50                                  | 81.54                         | 242                              | 1.7           | H              | 7.54                 | 0.43          | 10.60                   | 17.71                      | 33             | -15.29         |
| 2502.50                                  | 78.62                         | 345                              | 1.9           | V              | 8.34                 | 0.43          | 10.60                   | 18.51                      | 33             | -14.49         |
| LTE Band 7 Channel 21100 – 5MHz – QPSK   |                               |                                  |               |                |                      |               |                         |                            |                |                |
| 2535.00                                  | 81.59                         | 1                                | 1.1           | H              | 7.59                 | 0.43          | 10.60                   | 17.76                      | 33             | -15.24         |
| 2535.00                                  | 78.34                         | 38                               | 1.6           | V              | 8.06                 | 0.43          | 10.60                   | 18.23                      | 33             | -14.77         |
| LTE Band 7 Channel 21425 – 5MHz – QPSK   |                               |                                  |               |                |                      |               |                         |                            |                |                |
| 2567.50                                  | 81.45                         | 249                              | 1.4           | H              | 7.34                 | 0.43          | 10.60                   | 17.51                      | 33             | -15.49         |
| 2567.50                                  | 78.28                         | 302                              | 1.9           | V              | 8.09                 | 0.43          | 10.60                   | 18.26                      | 33             | -14.74         |
| LTE Band 7 Channel 20775 – 5MHz – 16QAM  |                               |                                  |               |                |                      |               |                         |                            |                |                |
| 2502.50                                  | 81.79                         | 163                              | 1.4           | H              | 7.79                 | 0.43          | 10.60                   | 17.96                      | 33             | -15.04         |
| 2502.50                                  | 78.42                         | 74                               | 1.2           | V              | 8.14                 | 0.43          | 10.60                   | 18.31                      | 33             | -14.69         |
| LTE Band 7 Channel 21100 – 5MHz – 16QAM  |                               |                                  |               |                |                      |               |                         |                            |                |                |
| 2535.00                                  | 81.28                         | 250                              | 2.1           | H              | 7.28                 | 0.43          | 10.60                   | 17.45                      | 33             | -15.55         |
| 2535.00                                  | 78.62                         | 129                              | 1.3           | V              | 8.34                 | 0.43          | 10.60                   | 18.51                      | 33             | -14.49         |
| LTE Band 7 Channel 21425 – 5MHz – 16QAM  |                               |                                  |               |                |                      |               |                         |                            |                |                |
| 2567.50                                  | 81.15                         | 0                                | 1.1           | H              | 7.04                 | 0.43          | 10.60                   | 17.21                      | 33             | -15.79         |
| 2567.50                                  | 78.26                         | 22                               | 1.8           | V              | 8.07                 | 0.43          | 10.60                   | 18.24                      | 33             | -14.76         |
| LTE Band 7 Channel 20800 – 10MHz – QPSK  |                               |                                  |               |                |                      |               |                         |                            |                |                |
| 2505.00                                  | 81.38                         | 20                               | 1.1           | H              | 7.38                 | 0.43          | 10.60                   | 17.55                      | 33             | -15.45         |
| 2505.00                                  | 78.15                         | 160                              | 2.4           | V              | 7.87                 | 0.43          | 10.60                   | 18.04                      | 33             | -14.96         |
| LTE Band 7 Channel 21100 – 10MHz – QPSK  |                               |                                  |               |                |                      |               |                         |                            |                |                |
| 2535.00                                  | 81.80                         | 26                               | 1.9           | H              | 7.80                 | 0.43          | 10.60                   | 17.97                      | 33             | -15.03         |
| 2535.00                                  | 78.50                         | 266                              | 1.1           | V              | 8.22                 | 0.43          | 10.60                   | 18.39                      | 33             | -14.61         |
| LTE Band 7 Channel 21400 – 10MHz – QPSK  |                               |                                  |               |                |                      |               |                         |                            |                |                |
| 2565.00                                  | 81.82                         | 285                              | 1.6           | H              | 7.71                 | 0.43          | 10.60                   | 17.88                      | 33             | -15.12         |
| 2565.00                                  | 78.31                         | 32                               | 2.5           | V              | 8.12                 | 0.43          | 10.60                   | 18.29                      | 33             | -14.71         |
| LTE Band 7 Channel 20800 – 10MHz – 16QAM |                               |                                  |               |                |                      |               |                         |                            |                |                |
| 2505.00                                  | 81.70                         | 252                              | 1.9           | H              | 7.70                 | 0.43          | 10.60                   | 17.87                      | 33             | -15.13         |
| 2505.00                                  | 78.39                         | 73                               | 2.3           | V              | 8.11                 | 0.43          | 10.60                   | 18.28                      | 33             | -14.72         |

| LTE Band 7 Channel 21100 – 10MHz – 16QAM |       |     |     |   |       |      |       |              |    |        |
|--|-------|-----|-----|---|-------|------|-------|--------------|----|--------|
| 2535.00                                  | 81.74 | 224 | 1.3 | H | 7.74  | 0.43 | 10.60 | 17.91        | 33 | -15.09 |
| 2535.00                                  | 79.00 | 125 | 1.9 | V | 8.72  | 0.43 | 10.60 | 18.89        | 33 | -14.11 |
| LTE Band 7 Channel 21400 – 10MHz – 16QAM |       |     |     |   |       |      |       |              |    |        |
| 2565.00                                  | 81.26 | 352 | 1.9 | H | 7.15  | 0.43 | 10.60 | 17.32        | 33 | -15.68 |
| 2565.00                                  | 79.01 | 179 | 1.1 | V | 8.82  | 0.43 | 10.60 | 18.99        | 33 | -14.01 |
| LTE Band 7 Channel 20825 – 15MHz – QPSK  |       |     |     |   |       |      |       |              |    |        |
| 2507.50                                  | 81.43 | 318 | 2.1 | H | 7.43  | 0.43 | 10.60 | 17.60        | 33 | -15.40 |
| 2507.50                                  | 78.67 | 86  | 2.4 | V | 8.39  | 0.43 | 10.60 | 18.56        | 33 | -14.44 |
| LTE Band 7 Channel 21100 – 15MHz – QPSK  |       |     |     |   |       |      |       |              |    |        |
| 2535.00                                  | 81.54 | 36  | 1.2 | H | 7.54  | 0.43 | 10.60 | 17.71        | 33 | -15.29 |
| 2535.00                                  | 78.45 | 287 | 2.1 | V | 8.17  | 0.43 | 10.60 | 18.34        | 33 | -14.66 |
| LTE Band 7 Channel 21375 – 15MHz – QPSK  |       |     |     |   |       |      |       |              |    |        |
| 2562.50                                  | 81.56 | 36  | 2.1 | H | 7.45  | 0.43 | 10.60 | 17.62        | 33 | -15.38 |
| 2562.50                                  | 78.31 | 225 | 2.1 | V | 8.12  | 0.43 | 10.60 | 18.29        | 33 | -14.71 |
| LTE Band 7 Channel 20825 – 15MHz – 16QAM |       |     |     |   |       |      |       |              |    |        |
| 2507.50                                  | 81.53 | 237 | 1.1 | H | 7.53  | 0.43 | 10.60 | 17.70        | 33 | -15.30 |
| 2507.50                                  | 78.41 | 106 | 2.0 | V | 8.13  | 0.43 | 10.60 | 18.30        | 33 | -14.70 |
| LTE Band 7 Channel 21100 – 15MHz – 16QAM |       |     |     |   |       |      |       |              |    |        |
| 2535.00                                  | 81.74 | 137 | 1.5 | H | 7.74  | 0.43 | 10.60 | 17.91        | 33 | -15.09 |
| 2535.00                                  | 78.65 | 305 | 1.5 | V | 8.37  | 0.43 | 10.60 | 18.54        | 33 | -14.46 |
| LTE Band 7 Channel 21375 – 15MHz – 16QAM |       |     |     |   |       |      |       |              |    |        |
| 2562.50                                  | 81.81 | 260 | 1.8 | H | 7.70  | 0.43 | 10.60 | 17.87        | 33 | -15.13 |
| 2562.50                                  | 78.68 | 205 | 2.1 | V | 8.49  | 0.43 | 10.60 | 18.66        | 33 | -14.34 |
| LTE Band 7 Channel 20850 – 20MHz – QPSK  |       |     |     |   |       |      |       |              |    |        |
| 2510.00                                  | 83.85 | 21  | 2.0 | H | 9.85  | 0.43 | 10.60 | 20.02        | 33 | -12.98 |
| 2510.00                                  | 80.00 | 287 | 1.7 | V | 9.72  | 0.43 | 10.60 | 19.89        | 33 | -13.11 |
| LTE Band 7 Channel 21100 – 20MHz – QPSK  |       |     |     |   |       |      |       |              |    |        |
| 2535.00                                  | 83.45 | 185 | 1.4 | H | 9.45  | 0.43 | 10.60 | 19.62        | 33 | -13.38 |
| 2535.00                                  | 80.12 | 11  | 1.8 | V | 9.84  | 0.43 | 10.60 | 20.01        | 33 | -12.99 |
| LTE Band 7 Channel 21350 – 20MHz – QPSK  |       |     |     |   |       |      |       |              |    |        |
| 2560.00                                  | 83.44 | 321 | 2.1 | H | 9.33  | 0.43 | 10.60 | 19.50        | 33 | -13.50 |
| 2560.00                                  | 80.25 | 40  | 1.2 | V | 10.06 | 0.43 | 10.60 | <b>20.23</b> | 33 | -12.77 |
| LTE Band 7 Channel 20850 – 20MHz – 16QAM |       |     |     |   |       |      |       |              |    |        |

|  |       |     |     |   |      |      |       |              |    |        |
|--|-------|-----|-----|---|------|------|-------|--------------|----|--------|
| 2510.00                                  | 83.47 | 206 | 1.9 | H | 9.47 | 0.43 | 10.60 | 19.64        | 33 | -13.36 |
| 2510.00                                  | 79.86 | 337 | 1.3 | V | 9.58 | 0.43 | 10.60 | <b>19.75</b> | 33 | -13.25 |
| LTE Band 7 Channel 21100 – 20MHz – 16QAM |       |     |     |   |      |      |       |              |    |        |
| 2535.00                                  | 83.46 | 78  | 2.4 | H | 9.46 | 0.43 | 10.60 | 19.63        | 33 | -13.37 |
| 2535.00                                  | 79.65 | 329 | 1.6 | V | 9.37 | 0.43 | 10.60 | 19.54        | 33 | -13.46 |
| LTE Band 7 Channel 21350 – 20MHz – 16QAM |       |     |     |   |      |      |       |              |    |        |
| 2560.00                                  | 83.58 | 221 | 1.5 | H | 9.47 | 0.43 | 10.60 | 19.64        | 33 | -13.36 |
| 2560.00                                  | 79.69 | 19  | 2.1 | V | 9.50 | 0.43 | 10.60 | 19.67        | 33 | -13.33 |

**LTE Band 12**

| Frequency                                  | Receiver Reading | Turn table Angle | RX Antenna |       | Substituted |       |              | Absolute Level | Part 27 |        |
|--|------------------|------------------|------------|-------|-------------|-------|--------------|----------------|---------|--------|
|  |                  |                  | Height     | Polar | SG Level    | Cable | Antenna Gain |                | Limit   | Margin |
| (MHz)                                      | (dBμV)           | Degree           | (m)        | (H/V) | (dBm)       | (dB)  | (dB)         | (dBm)          | (dBm)   | (dB)   |
| LTE Band 12 Channel 23017 – 1.4MHz – QPSK  |                  |                  |            |       |             |       |              |                |         |        |
| 699.70                                     | 88.63            | 283              | 1.1        | H     | 17.63       | 0.20  | 0.00         | 17.43          | 34.77   | -17.34 |
| 699.70                                     | 89.56            | 73               | 2.0        | V     | 17.28       | 0.20  | 0.00         | 17.08          | 34.77   | -17.69 |
| LTE Band 12 Channel 23095 – 1.4MHz – QPSK  |                  |                  |            |       |             |       |              |                |         |        |
| 707.50                                     | 88.98            | 357              | 1.6        | H     | 17.98       | 0.20  | 0.00         | 17.78          | 34.77   | -16.99 |
| 707.50                                     | 89.96            | 5                | 2.1        | V     | 17.68       | 0.20  | 0.00         | 17.48          | 34.77   | -17.29 |
| LTE Band 12 Channel 23173 – 1.4MHz – QPSK  |                  |                  |            |       |             |       |              |                |         |        |
| 715.30                                     | 88.74            | 64               | 2.1        | H     | 17.74       | 0.20  | 0.00         | 17.54          | 34.77   | -17.23 |
| 715.30                                     | 90.12            | 344              | 1.2        | V     | 17.84       | 0.20  | 0.00         | 17.64          | 34.77   | -17.13 |
| LTE Band 12 Channel 23017 – 1.4MHz – 16QAM |                  |                  |            |       |             |       |              |                |         |        |
| 699.70                                     | 89.06            | 263              | 1.5        | H     | 18.06       | 0.20  | 0.00         | 17.86          | 34.77   | -16.91 |
| 699.70                                     | 90.15            | 342              | 1.7        | V     | 17.87       | 0.20  | 0.00         | 17.67          | 34.77   | -17.10 |
| LTE Band 12 Channel 23095 – 1.4MHz – 16QAM |                  |                  |            |       |             |       |              |                |         |        |
| 707.50                                     | 88.85            | 222              | 2.1        | H     | 17.85       | 0.20  | 0.00         | 17.65          | 34.77   | -17.12 |
| 707.50                                     | 88.60            | 197              | 2.0        | V     | 16.32       | 0.20  | 0.00         | 16.12          | 34.77   | -18.65 |
| LTE Band 12 Channel 23173 – 1.4MHz – 16QAM |                  |                  |            |       |             |       |              |                |         |        |
| 715.30                                     | 88.50            | 329              | 2.5        | H     | 17.50       | 0.20  | 0.00         | 17.30          | 34.77   | -17.47 |
| 715.30                                     | 90.52            | 351              | 1.1        | V     | 18.24       | 0.20  | 0.00         | 18.04          | 34.77   | -16.73 |
| LTE Band 12 Channel 23025 – 3MHz – QPSK    |                  |                  |            |       |             |       |              |                |         |        |
| 700.50                                     | 89.45            | 62               | 1.8        | H     | 18.45       | 0.20  | 0.00         | 18.25          | 34.77   | -16.52 |
| 700.50                                     | 90.56            | 339              | 2.3        | V     | 18.28       | 0.20  | 0.00         | 18.08          | 34.77   | -16.69 |
| LTE Band 12 Channel 23095 – 3MHz – QPSK    |                  |                  |            |       |             |       |              |                |         |        |
| 707.50                                     | 89.68            | 172              | 1.4        | H     | 18.68       | 0.20  | 0.00         | 18.48          | 34.77   | -16.29 |
| 707.50                                     | 90.78            | 100              | 1.0        | V     | 18.50       | 0.20  | 0.00         | 18.30          | 34.77   | -16.47 |
| LTE Band 12 Channel 23165 – 3MHz – QPSK    |                  |                  |            |       |             |       |              |                |         |        |
| 714.50                                     | 89.75            | 37               | 2.3        | H     | 18.75       | 0.20  | 0.00         | 18.55          | 34.77   | -16.22 |
| 714.50                                     | 90.89            | 131              | 1.7        | V     | 18.61       | 0.20  | 0.00         | 18.41          | 34.77   | -16.36 |
| LTE Band 12 Channel 23025 – 3MHz – 16QAM   |                  |                  |            |       |             |       |              |                |         |        |
| 700.50                                     | 89.73            | 132              | 1.9        | H     | 18.73       | 0.20  | 0.00         | 18.53          | 34.77   | -16.24 |
| 700.50                                     | 90.92            | 293              | 1.2        | V     | 18.64       | 0.20  | 0.00         | 18.44          | 34.77   | -16.33 |
| LTE Band 12 Channel 23095 – 3MHz – 16QAM   |                  |                  |            |       |             |       |              |                |         |        |

|   |       |     |     |   |       |      |      |              |       |        |
|---|-------|-----|-----|---|-------|------|------|--------------|-------|--------|
| 707.50                                    | 89.96 | 85  | 1.9 | H | 18.96 | 0.20 | 0.00 | 18.76        | 34.77 | -16.01 |
| 707.50                                    | 90.98 | 93  | 1.2 | V | 18.70 | 0.20 | 0.00 | 18.50        | 34.77 | -16.27 |
| LTE Band 12 Channel 23165 – 3MHz – 16QAM  |       |     |     |   |       |      |      |              |       |        |
| 714.50                                    | 90.12 | 265 | 1.2 | H | 19.12 | 0.20 | 0.00 | 18.92        | 34.77 | -15.85 |
| 714.50                                    | 90.99 | 294 | 1.1 | V | 18.71 | 0.20 | 0.00 | 18.51        | 34.77 | -16.26 |
| LTE Band 12 Channel 23035 – 5MHz – QPSK   |       |     |     |   |       |      |      |              |       |        |
| 701.50                                    | 90.02 | 285 | 1.1 | H | 19.02 | 0.20 | 0.00 | 18.82        | 34.77 | -15.95 |
| 701.50                                    | 90.89 | 6   | 1.0 | V | 18.61 | 0.20 | 0.00 | 18.41        | 34.77 | -16.36 |
| LTE Band 12 Channel 23095 – 5MHz – QPSK   |       |     |     |   |       |      |      |              |       |        |
| 707.50                                    | 90.05 | 43  | 1.0 | H | 19.05 | 0.20 | 0.00 | 18.85        | 34.77 | -15.92 |
| 707.50                                    | 90.96 | 154 | 2.1 | V | 18.68 | 0.20 | 0.00 | 18.48        | 34.77 | -16.29 |
| LTE Band 12 Channel 23155 – 5MHz – QPSK   |       |     |     |   |       |      |      |              |       |        |
| 713.50                                    | 90.03 | 87  | 2.3 | H | 19.03 | 0.20 | 0.00 | 18.83        | 34.77 | -15.94 |
| 713.50                                    | 90.89 | 342 | 1.9 | V | 18.61 | 0.20 | 0.00 | 18.41        | 34.77 | -16.36 |
| LTE Band 12 Channel 23035 – 5MHz – 16QAM  |       |     |     |   |       |      |      |              |       |        |
| 701.50                                    | 90.06 | 310 | 1.4 | H | 19.06 | 0.20 | 0.00 | 18.86        | 34.77 | -15.91 |
| 701.50                                    | 91.00 | 205 | 2.1 | V | 18.72 | 0.20 | 0.00 | 18.52        | 34.77 | -16.25 |
| LTE Band 12 Channel 23095 – 5MHz – 16QAM  |       |     |     |   |       |      |      |              |       |        |
| 707.50                                    | 90.08 | 271 | 1.9 | H | 19.08 | 0.20 | 0.00 | 18.88        | 34.77 | -15.89 |
| 707.50                                    | 91.02 | 78  | 1.3 | V | 18.74 | 0.20 | 0.00 | 18.54        | 34.77 | -16.23 |
| LTE Band 12 Channel 23155 – 5MHz – 16QAM  |       |     |     |   |       |      |      |              |       |        |
| 713.50                                    | 90.09 | 348 | 2.3 | H | 19.09 | 0.20 | 0.00 | 18.89        | 34.77 | -15.88 |
| 713.50                                    | 91.06 | 261 | 1.5 | V | 18.78 | 0.20 | 0.00 | 18.58        | 34.77 | -16.19 |
| LTE Band 12 Channel 23060 – 10MHz – QPSK  |       |     |     |   |       |      |      |              |       |        |
| 704.00                                    | 91.00 | 305 | 2.4 | H | 20.00 | 0.20 | 0.00 | 19.80        | 34.77 | -14.97 |
| 704.00                                    | 92.00 | 226 | 2.2 | V | 19.72 | 0.20 | 0.00 | 19.52        | 34.77 | -15.25 |
| LTE Band 12 Channel 23095 – 10MHz – QPSK  |       |     |     |   |       |      |      |              |       |        |
| 707.50                                    | 91.30 | 260 | 1.7 | H | 20.30 | 0.20 | 0.00 | 20.10        | 34.77 | -14.67 |
| 707.50                                    | 92.40 | 324 | 1.3 | V | 20.12 | 0.20 | 0.00 | 19.92        | 34.77 | -14.85 |
| LTE Band 12 Channel 23130 – 10MHz – QPSK  |       |     |     |   |       |      |      |              |       |        |
| 711.00                                    | 91.35 | 187 | 2.2 | H | 20.35 | 0.20 | 0.00 | <b>20.15</b> | 34.77 | -14.62 |
| 711.00                                    | 92.46 | 41  | 1.8 | V | 20.18 | 0.20 | 0.00 | 19.98        | 34.77 | -14.79 |
| LTE Band 12 Channel 23060 – 10MHz – 16QAM |       |     |     |   |       |      |      |              |       |        |
| 704.00                                    | 91.33 | 298 | 1.6 | H | 20.33 | 0.20 | 0.00 | <b>20.13</b> | 34.77 | -14.64 |

|   |       |     |     |   |       |      |      |       |       |        |
|---|-------|-----|-----|---|-------|------|------|-------|-------|--------|
| 704.00                                    | 92.47 | 169 | 1.1 | V | 20.19 | 0.20 | 0.00 | 19.99 | 34.77 | -14.78 |
| LTE Band 12 Channel 23095 – 10MHz – 16QAM |       |     |     |   |       |      |      |       |       |        |
| 707.50                                    | 91.08 | 200 | 1.0 | H | 20.08 | 0.20 | 0.00 | 19.88 | 34.77 | -14.89 |
| 707.50                                    | 92.26 | 164 | 1.4 | V | 19.98 | 0.20 | 0.00 | 19.78 | 34.77 | -14.99 |
| LTE Band 12 Channel 23130 – 10MHz – 16QAM |       |     |     |   |       |      |      |       |       |        |
| 711.00                                    | 91.10 | 292 | 2.4 | H | 20.10 | 0.20 | 0.00 | 19.90 | 34.77 | -14.87 |
| 711.00                                    | 92.33 | 4   | 2.3 | V | 20.05 | 0.20 | 0.00 | 19.85 | 34.77 | -14.92 |



**LTE Band 13**

| Frequency                                 | Receiver Reading | Turn table Angle | RX Antenna |       | Substituted |       |              | Absolute Level | Part 27 |        |
|---|------------------|------------------|------------|-------|-------------|-------|--------------|----------------|---------|--------|
|   |                  |                  | Height     | Polar | SG Level    | Cable | Antenna Gain |                | Limit   | Margin |
| (MHz)                                     | (dBμV)           | Degree           | (m)        | (H/V) | (dBm)       | (dB)  | (dB)         | (dBm)          | (dBm)   | (dB)   |
| LTE Band 13 Channel 23205 – 5MHz – QPSK   |                  |                  |            |       |             |       |              |                |         |        |
| 779.50                                    | 90.00            | 63               | 1.1        | H     | 19.00       | 0.20  | 0.00         | 18.80          | 34.77   | -15.97 |
| 779.50                                    | 90.15            | 41               | 2.2        | V     | 17.87       | 0.20  | 0.00         | 17.67          | 34.77   | -17.10 |
| LTE Band 13 Channel 23230 – 5MHz – QPSK   |                  |                  |            |       |             |       |              |                |         |        |
| 782.00                                    | 90.15            | 41               | 1.6        | H     | 19.15       | 0.20  | 0.00         | 18.95          | 34.77   | -15.82 |
| 782.00                                    | 90.23            | 51               | 1.5        | V     | 17.95       | 0.20  | 0.00         | 17.75          | 34.77   | -17.02 |
| LTE Band 13 Channel 23255 – 5MHz – QPSK   |                  |                  |            |       |             |       |              |                |         |        |
| 784.50                                    | 90.06            | 172              | 1.3        | H     | 19.06       | 0.20  | 0.00         | 18.86          | 34.77   | -15.91 |
| 784.50                                    | 90.56            | 107              | 1.1        | V     | 18.28       | 0.20  | 0.00         | 18.08          | 34.77   | -16.69 |
| LTE Band 13 Channel 23205 – 5MHz – 16QAM  |                  |                  |            |       |             |       |              |                |         |        |
| 779.50                                    | 90.14            | 237              | 2.0        | H     | 19.14       | 0.20  | 0.00         | 18.94          | 34.77   | -15.83 |
| 779.50                                    | 90.58            | 287              | 2.1        | V     | 18.30       | 0.20  | 0.00         | 18.10          | 34.77   | -16.67 |
| LTE Band 13 Channel 23230 – 5MHz – 16QAM  |                  |                  |            |       |             |       |              |                |         |        |
| 782.00                                    | 90.26            | 135              | 1.9        | H     | 19.26       | 0.20  | 0.00         | 19.06          | 34.77   | -15.71 |
| 782.00                                    | 90.69            | 73               | 1.3        | V     | 18.41       | 0.20  | 0.00         | 18.21          | 34.77   | -16.56 |
| LTE Band 13 Channel 23255 – 5MHz – 16QAM  |                  |                  |            |       |             |       |              |                |         |        |
| 784.50                                    | 90.36            | 343              | 1.7        | H     | 19.36       | 0.20  | 0.00         | 19.16          | 34.77   | -15.61 |
| 784.50                                    | 90.48            | 34               | 2.4        | V     | 18.20       | 0.20  | 0.00         | 18.00          | 34.77   | -16.77 |
| LTE Band 13 Channel 23230 – 10MHz – QPSK  |                  |                  |            |       |             |       |              |                |         |        |
| 782.00                                    | 91.14            | 209              | 2.4        | H     | 20.14       | 0.20  | 0.00         | <b>19.94</b>   | 34.77   | -14.83 |
| 782.00                                    | 91.69            | 129              | 1.5        | V     | 19.41       | 0.20  | 0.00         | 19.21          | 34.77   | -15.56 |
| LTE Band 13 Channel 23230 – 10MHz – 16QAM |                  |                  |            |       |             |       |              |                |         |        |
| 782.00                                    | 91.18            | 233              | 1.6        | H     | 20.18       | 0.20  | 0.00         | <b>19.98</b>   | 34.77   | -14.79 |
| 782.00                                    | 91.79            | 177              | 2.3        | V     | 19.51       | 0.20  | 0.00         | 19.31          | 34.77   | -15.46 |

**LTE Band 66**

| Frequency                                   | Receiver Reading | Turn table Angle | RX Antenna |       | Substituted |       |              | Absolute Level | Part 27 |        |
|---|------------------|------------------|------------|-------|-------------|-------|--------------|----------------|---------|--------|
|   |                  |                  | Height     | Polar | SG Level    | Cable | Antenna Gain |                | Limit   | Margin |
| (MHz)                                       | (dBμV)           | Degree           | (m)        | (H/V) | (dBm)       | (dB)  | (dB)         | (dBm)          | (dBm)   | (dB)   |
| LTE Band 66 Channel 131979 – 1.4MHz – QPSK  |                  |                  |            |       |             |       |              |                |         |        |
| 1710.70                                     | 85.00            | 261              | 2.5        | H     | 11.00       | 0.30  | 9.40         | 20.10          | 30      | -9.90  |
| 1710.70                                     | 84.65            | 296              | 2.4        | V     | 9.37        | 0.30  | 9.40         | 18.47          | 30      | -11.53 |
| LTE Band 66 Channel 132321 – 1.4MHz – QPSK  |                  |                  |            |       |             |       |              |                |         |        |
| 1744.90                                     | 84.99            | 21               | 2.2        | H     | 10.99       | 0.30  | 9.40         | 20.09          | 30      | -9.91  |
| 1744.90                                     | 84.80            | 140              | 2.1        | V     | 9.52        | 0.30  | 9.40         | 18.62          | 30      | -11.38 |
| LTE Band 66 Channel 132664 – 1.4MHz – QPSK  |                  |                  |            |       |             |       |              |                |         |        |
| 1779.20                                     | 84.94            | 360              | 1.8        | H     | 10.83       | 0.30  | 9.40         | 19.93          | 30      | -10.07 |
| 1779.20                                     | 84.86            | 83               | 1.3        | V     | 9.67        | 0.30  | 9.40         | 18.77          | 30      | -11.23 |
| LTE Band 66 Channel 131979 – 1.4MHz – 16QAM |                  |                  |            |       |             |       |              |                |         |        |
| 1710.70                                     | 85.15            | 222              | 1.4        | H     | 11.15       | 0.30  | 9.40         | 20.25          | 30      | -9.75  |
| 1710.70                                     | 84.96            | 35               | 2.1        | V     | 9.68        | 0.30  | 9.40         | 18.78          | 30      | -11.22 |
| LTE Band 66 Channel 132321 – 1.4MHz – 16QAM |                  |                  |            |       |             |       |              |                |         |        |
| 1744.90                                     | 85.03            | 309              | 2.3        | H     | 11.03       | 0.30  | 9.40         | 20.13          | 30      | -9.87  |
| 1744.90                                     | 85.02            | 127              | 1.0        | V     | 9.74        | 0.30  | 9.40         | 18.84          | 30      | -11.16 |
| LTE Band 66 Channel 132664 – 1.4MHz – 16QAM |                  |                  |            |       |             |       |              |                |         |        |
| 1779.20                                     | 84.92            | 333              | 1.5        | H     | 10.81       | 0.30  | 9.40         | 19.91          | 30      | -10.09 |
| 1779.20                                     | 84.97            | 48               | 2.1        | V     | 9.78        | 0.30  | 9.40         | 18.88          | 30      | -11.12 |
| LTE Band 66 Channel 131987 – 3MHz – QPSK    |                  |                  |            |       |             |       |              |                |         |        |
| 1711.50                                     | 85.12            | 37               | 1.8        | H     | 11.12       | 0.30  | 9.40         | 20.22          | 30      | -9.78  |
| 1711.50                                     | 84.93            | 136              | 1.8        | V     | 9.65        | 0.30  | 9.40         | 18.75          | 30      | -11.25 |
| LTE Band 66 Channel 132321 – 3MHz – QPSK    |                  |                  |            |       |             |       |              |                |         |        |
| 1744.90                                     | 85.04            | 313              | 1.2        | H     | 11.04       | 0.30  | 9.40         | 20.14          | 30      | -9.86  |
| 1744.90                                     | 85.19            | 220              | 1.7        | V     | 9.91        | 0.30  | 9.40         | 19.01          | 30      | -10.99 |
| LTE Band 66 Channel 132665 – 3MHz – QPSK    |                  |                  |            |       |             |       |              |                |         |        |
| 1778.40                                     | 84.64            | 137              | 1.9        | H     | 10.53       | 0.30  | 9.40         | 19.63          | 30      | -10.37 |
| 1778.40                                     | 84.94            | 315              | 2.4        | V     | 9.75        | 0.30  | 9.40         | 18.85          | 30      | -11.15 |
| LTE Band 66 Channel 131987 – 3MHz – 16QAM   |                  |                  |            |       |             |       |              |                |         |        |
| 1711.50                                     | 85.18            | 290              | 1.7        | H     | 11.18       | 0.30  | 9.40         | 20.28          | 30      | -9.72  |
| 1711.50                                     | 84.69            | 266              | 1.0        | V     | 9.41        | 0.30  | 9.40         | 18.51          | 30      | -11.49 |
| LTE Band 66 Channel 132321 – 3MHz – 16QAM   |                  |                  |            |       |             |       |              |                |         |        |

|  |       |     |     |   |       |      |      |       |    |        |
|--|-------|-----|-----|---|-------|------|------|-------|----|--------|
| 1744.90                                    | 84.87 | 281 | 1.8 | H | 10.87 | 0.30 | 9.40 | 19.97 | 30 | -10.03 |
| 1744.90                                    | 84.67 | 226 | 1.7 | V | 9.39  | 0.30 | 9.40 | 18.49 | 30 | -11.51 |
| LTE Band 66 Channel 132665 – 3MHz – 16QAM  |       |     |     |   |       |      |      |       |    |        |
| 1778.40                                    | 85.29 | 170 | 2.0 | H | 11.18 | 0.30 | 9.40 | 20.28 | 30 | -9.72  |
| 1778.40                                    | 85.46 | 169 | 1.2 | V | 10.27 | 0.30 | 9.40 | 19.37 | 30 | -10.63 |
| LTE Band 66 Channel 131997 – 5MHz – QPSK   |       |     |     |   |       |      |      |       |    |        |
| 1712.50                                    | 84.99 | 7   | 1.6 | H | 10.99 | 0.30 | 9.40 | 20.09 | 30 | -9.91  |
| 1712.50                                    | 84.80 | 18  | 1.3 | V | 9.52  | 0.30 | 9.40 | 18.62 | 30 | -11.38 |
| LTE Band 66 Channel 132321 – 5MHz – QPSK   |       |     |     |   |       |      |      |       |    |        |
| 1744.90                                    | 85.00 | 4   | 1.3 | H | 11.00 | 0.30 | 9.40 | 20.10 | 30 | -9.90  |
| 1744.90                                    | 85.10 | 13  | 1.0 | V | 9.82  | 0.30 | 9.40 | 18.92 | 30 | -11.08 |
| LTE Band 66 Channel 132646 – 5MHz – QPSK   |       |     |     |   |       |      |      |       |    |        |
| 1777.40                                    | 84.76 | 179 | 1.6 | H | 10.65 | 0.30 | 9.40 | 19.75 | 30 | -10.25 |
| 1777.40                                    | 84.91 | 188 | 1.2 | V | 9.72  | 0.30 | 9.40 | 18.82 | 30 | -11.18 |
| LTE Band 66 Channel 131997 – 5MHz – 16QAM  |       |     |     |   |       |      |      |       |    |        |
| 1712.50                                    | 84.75 | 192 | 2.3 | H | 10.75 | 0.30 | 9.40 | 19.85 | 30 | -10.15 |
| 1712.50                                    | 85.12 | 336 | 1.2 | V | 9.84  | 0.30 | 9.40 | 18.94 | 30 | -11.06 |
| LTE Band 66 Channel 132321 – 5MHz – 16QAM  |       |     |     |   |       |      |      |       |    |        |
| 1744.90                                    | 85.25 | 71  | 2.0 | H | 11.25 | 0.30 | 9.40 | 20.35 | 30 | -9.65  |
| 1744.90                                    | 85.21 | 93  | 1.7 | V | 9.93  | 0.30 | 9.40 | 19.03 | 30 | -10.97 |
| LTE Band 66 Channel 131997 – 5MHz – 16QAM  |       |     |     |   |       |      |      |       |    |        |
| 1777.40                                    | 85.13 | 238 | 2.3 | H | 11.02 | 0.30 | 9.40 | 20.12 | 30 | -9.88  |
| 1777.40                                    | 85.10 | 100 | 1.9 | V | 9.91  | 0.30 | 9.40 | 19.01 | 30 | -10.99 |
| LTE Band 66 Channel 132022 – 10MHz – QPSK  |       |     |     |   |       |      |      |       |    |        |
| 1715.00                                    | 84.63 | 88  | 1.4 | H | 10.63 | 0.30 | 9.40 | 19.73 | 30 | -10.27 |
| 1715.00                                    | 85.13 | 58  | 1.5 | V | 9.85  | 0.30 | 9.40 | 18.95 | 30 | -11.05 |
| LTE Band 66 Channel 132321 – 10MHz – QPSK  |       |     |     |   |       |      |      |       |    |        |
| 1744.90                                    | 85.01 | 114 | 1.0 | H | 11.01 | 0.30 | 9.40 | 20.11 | 30 | -9.89  |
| 1744.90                                    | 84.95 | 150 | 2.0 | V | 9.67  | 0.30 | 9.40 | 18.77 | 30 | -11.23 |
| LTE Band 66 Channel 132621 – 10MHz – QPSK  |       |     |     |   |       |      |      |       |    |        |
| 1774.90                                    | 84.86 | 47  | 2.2 | H | 10.75 | 0.30 | 9.40 | 19.85 | 30 | -10.15 |
| 1774.90                                    | 85.07 | 251 | 2.2 | V | 9.88  | 0.30 | 9.40 | 18.98 | 30 | -11.02 |
| LTE Band 66 Channel 132022 – 10MHz – 16QAM |       |     |     |   |       |      |      |       |    |        |
| 1715.0                                     | 84.78 | 166 | 1.6 | H | 10.78 | 0.30 | 9.40 | 19.88 | 30 | -10.12 |

|  |       |     |     |   |       |      |      |              |    |        |
|--|-------|-----|-----|---|-------|------|------|--------------|----|--------|
| 1715.0                                     | 84.96 | 356 | 1.5 | V | 9.68  | 0.30 | 9.40 | 18.78        | 30 | -11.22 |
| LTE Band 66 Channel 132321 – 10MHz – 16QAM |       |     |     |   |       |      |      |              |    |        |
| 1744.90                                    | 85.16 | 343 | 1.2 | H | 11.16 | 0.30 | 9.40 | 20.26        | 30 | -9.74  |
| 1744.90                                    | 85.31 | 154 | 2.4 | V | 10.03 | 0.30 | 9.40 | 19.13        | 30 | -10.87 |
| LTE Band 66 Channel 132621 – 10MHz – 16QAM |       |     |     |   |       |      |      |              |    |        |
| 1774.90                                    | 84.86 | 17  | 1.2 | H | 10.75 | 0.30 | 9.40 | 19.85        | 30 | -10.15 |
| 1774.90                                    | 84.88 | 302 | 1.1 | V | 9.69  | 0.30 | 9.40 | 18.79        | 30 | -11.21 |
| LTE Band 66 Channel 132097 – 15MHz – QPSK  |       |     |     |   |       |      |      |              |    |        |
| 1722.50                                    | 85.24 | 85  | 1.5 | H | 11.24 | 0.30 | 9.40 | 20.34        | 30 | -9.66  |
| 1722.50                                    | 85.20 | 319 | 1.2 | V | 9.92  | 0.30 | 9.40 | 19.02        | 30 | -10.98 |
| LTE Band 66 Channel 132321 – 15MHz – QPSK  |       |     |     |   |       |      |      |              |    |        |
| 1744.90                                    | 85.40 | 49  | 2.4 | H | 11.40 | 0.30 | 9.40 | 20.50        | 30 | -9.50  |
| 1744.90                                    | 84.69 | 357 | 2.3 | V | 9.41  | 0.30 | 9.40 | 18.51        | 30 | -11.49 |
| LTE Band 66 Channel 132546 – 15MHz – QPSK  |       |     |     |   |       |      |      |              |    |        |
| 1767.40                                    | 84.91 | 313 | 1.1 | H | 10.80 | 0.30 | 9.40 | 19.90        | 30 | -10.10 |
| 1767.40                                    | 84.91 | 18  | 2.0 | V | 9.72  | 0.30 | 9.40 | 18.82        | 30 | -11.18 |
| LTE Band 66 Channel 132097 – 15MHz – 16QAM |       |     |     |   |       |      |      |              |    |        |
| 1722.50                                    | 84.80 | 328 | 1.6 | H | 10.80 | 0.30 | 9.40 | 19.90        | 30 | -10.10 |
| 1722.50                                    | 84.87 | 218 | 1.1 | V | 9.59  | 0.30 | 9.40 | 18.69        | 30 | -11.31 |
| LTE Band 66 Channel 132321 – 15MHz – 16QAM |       |     |     |   |       |      |      |              |    |        |
| 1744.90                                    | 85.07 | 36  | 2.4 | H | 11.07 | 0.30 | 9.40 | 20.17        | 30 | -9.83  |
| 1744.90                                    | 84.78 | 130 | 1.2 | V | 9.50  | 0.30 | 9.40 | 18.60        | 30 | -11.40 |
| LTE Band 66 Channel 132546 – 15MHz – 16QAM |       |     |     |   |       |      |      |              |    |        |
| 1767.40                                    | 85.00 | 13  | 2.0 | H | 10.89 | 0.30 | 9.40 | 19.99        | 30 | -10.01 |
| 1767.40                                    | 86.12 | 298 | 1.9 | V | 10.93 | 0.30 | 9.40 | 20.03        | 30 | -9.97  |
| LTE Band 66 Channel 132072 – 20MHz – QPSK  |       |     |     |   |       |      |      |              |    |        |
| 1720.00                                    | 87.56 | 268 | 1.4 | H | 13.56 | 0.30 | 9.40 | 22.66        | 30 | -7.34  |
| 1720.00                                    | 88.59 | 220 | 2.3 | V | 13.31 | 0.30 | 9.40 | 22.41        | 30 | -7.59  |
| LTE Band 66 Channel 132321 – 20MHz – QPSK  |       |     |     |   |       |      |      |              |    |        |
| 1744.90                                    | 87.59 | 33  | 1.4 | H | 13.59 | 0.30 | 9.40 | <b>22.69</b> | 30 | -7.31  |
| 1744.90                                    | 88.74 | 254 | 1.9 | V | 13.46 | 0.30 | 9.40 | 22.56        | 30 | -7.44  |
| LTE Band 66 Channel 132471 – 20MHz – QPSK  |       |     |     |   |       |      |      |              |    |        |
| 1759.90                                    | 87.43 | 221 | 1.9 | H | 13.32 | 0.30 | 9.40 | 22.42        | 30 | -7.58  |
| 1759.90                                    | 88.72 | 205 | 1.5 | V | 13.53 | 0.30 | 9.40 | 22.63        | 30 | -7.37  |

| LTE Band 66 Channel 132072 – 20MHz – 16QAM |       |     |     |   |       |      |      |              |    |       |
|--|-------|-----|-----|---|-------|------|------|--------------|----|-------|
| 1720.00                                    | 87.41 | 274 | 1.5 | H | 13.41 | 0.30 | 9.40 | 22.51        | 30 | -7.49 |
| 1720.00                                    | 88.76 | 176 | 2.0 | V | 13.48 | 0.30 | 9.40 | 22.58        | 30 | -7.42 |
| LTE Band 66 Channel 132321 – 20MHz – 16QAM |       |     |     |   |       |      |      |              |    |       |
| 1744.90                                    | 87.45 | 151 | 1.3 | H | 13.45 | 0.30 | 9.40 | 22.55        | 30 | -7.45 |
| 1744.90                                    | 88.79 | 112 | 2.4 | V | 13.51 | 0.30 | 9.40 | <b>22.61</b> | 30 | -7.39 |
| LTE Band 66 Channel 132471 – 20MHz – 16QAM |       |     |     |   |       |      |      |              |    |       |
| 1759.90                                    | 87.36 | 199 | 1.6 | H | 13.25 | 0.30 | 9.40 | 22.35        | 30 | -7.65 |
| 1759.90                                    | 88.54 | 349 | 1.6 | V | 13.35 | 0.30 | 9.40 | 22.45        | 30 | -7.55 |

## 8 Peak-to-Average Ratio

|                   |                      |
|-------------------|----------------------|
| Test Requirement: | 24.232 (d), 27.50(d) |
| Test Method:      | N/A                  |
| Test Mode:        | TX transmitting      |

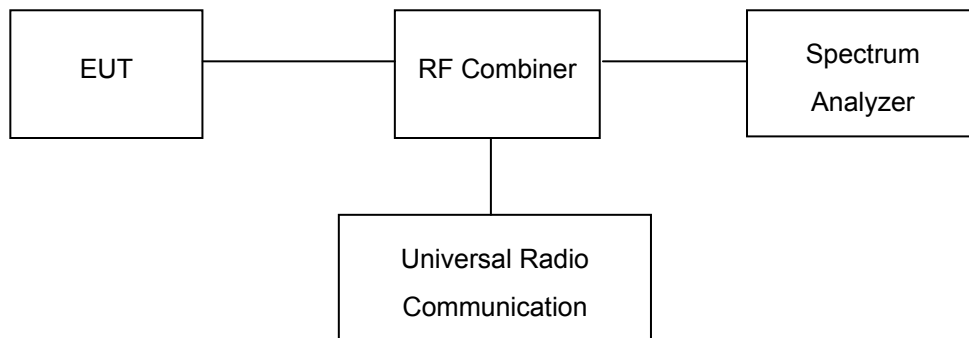
### 8.1 EUT Operation

Operating Environment :

|                       |          |
|-----------------------|----------|
| Temperature:          | 22.5 °C  |
| Humidity:             | 52.3% RH |
| Atmospheric Pressure: | 101.2kPa |

### 8.2 Test Procedure

1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. Set EUT to transmit at maximum output power.
3. When the duty cycle is less than 98%, then signal gating will be implemented on the spectrum analyzer by triggering from the system simulator.
4. Set the CCDF (Complementary Cumulative Distribution Function) option of the spectrum analyzer. Record the maximum PAPR level associated with a probability of 0.1%.



### 8.3 Test Result

PASS

#### LTE Band

Please refer to the Appendix Band 2/4/5/7/12/13/66 LTE Peak to Average Ratio.

## 9 Bandwidth

|                   |   |
|-------------------|---|
| Test Requirement: | FCC Part 2.1049, 22.917, 22.905, 24.238, 27.53(a); 90.691 |
| Test Method:      | ANSI C63.26:2015<br>ANSI/TIA-603-E:2016                   |
| Test Mode:        | TX transmitting   |

### 9.1 EUT Operation

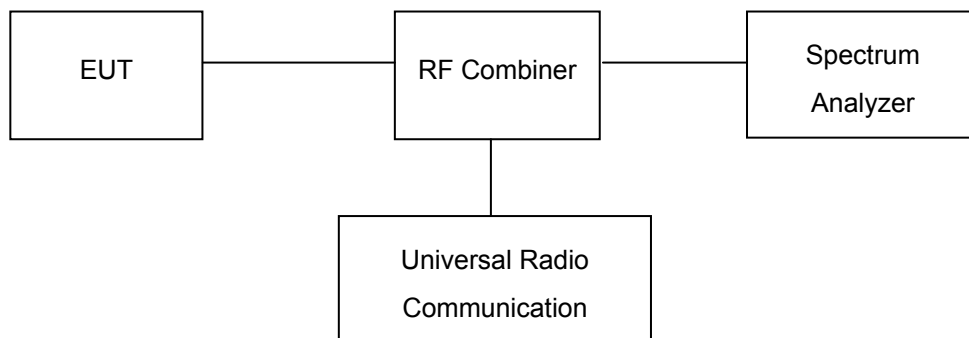
Operating Environment :

|                       |          |
|-----------------------|----------|
| Temperature:          | 22.5 °C  |
| Humidity:             | 52.3% RH |
| Atmospheric Pressure: | 101.2kPa |

### 9.2 Test Procedure

The RF output of the transmitter was connected to the wireless test set and the spectrum analyzer through sufficient attenuation.

The resolution bandwidth of the spectrum analyzer was set in the range of 1 to 5 % of the anticipated OBW and the 26 dB & 99%bandwidth was recorded.



### 9.3 Test Result

#### LTE Band 2 (Part 24E):

| BW(MHz) | Channel | Frequency (MHz) | Modulation | 99% Occupied Bandwidth (MHz) | 26 dB Bandwidth (MHz) |
|---------|---------|-----------------|------------|------------------------------|-----------------------|
| 1.4     | 18607   | 1850.7          | QPSK       | 1.08                         | 1.25                  |
|         |         |                 | 16QAM      | 1.08                         | 1.26                  |
| 1.4     | 18900   | 1880            | QPSK       | 1.08                         | 1.24                  |
|         |         |                 | 16QAM      | 1.08                         | 1.24                  |
| 1.4     | 19193   | 1909.3          | QPSK       | 1.09                         | 1.25                  |
|         |         |                 | 16QAM      | 1.08                         | 1.26                  |
| 3       | 18615   | 1851.5          | QPSK       | 2.67                         | 2.83                  |
|         |         |                 | 16QAM      | 2.67                         | 2.82                  |
| 3       | 18900   | 1880            | QPSK       | 2.68                         | 2.84                  |
|         |         |                 | 16QAM      | 2.68                         | 2.84                  |
| 3       | 19185   | 1908.5          | QPSK       | 2.68                         | 2.83                  |
|         |         |                 | 16QAM      | 2.67                         | 2.84                  |
| 5       | 18625   | 1852.5          | QPSK       | 4.49                         | 4.78                  |
|         |         |                 | 16QAM      | 4.49                         | 4.77                  |
| 5       | 18900   | 1880            | QPSK       | 4.49                         | 4.78                  |
|         |         |                 | 16QAM      | 4.49                         | 4.78                  |
| 5       | 19175   | 1907.5          | QPSK       | 4.48                         | 4.77                  |
|         |         |                 | 16QAM      | 4.48                         | 4.78                  |
| 10      | 18650   | 1855            | QPSK       | 8.93                         | 9.33                  |
|         |         |                 | 16QAM      | 8.93                         | 9.32                  |
| 10      | 18900   | 1880            | QPSK       | 8.92                         | 9.31                  |
|         |         |                 | 16QAM      | 8.92                         | 9.3                   |
| 10      | 19150   | 1905            | QPSK       | 8.92                         | 9.3                   |
|         |         |                 | 16QAM      | 8.92                         | 9.3                   |
| 15      | 18675   | 1857.5          | QPSK       | 13.46                        | 14.22                 |
|         |         |                 | 16QAM      | 13.46                        | 14.21                 |
| 15      | 18900   | 1880            | QPSK       | 13.47                        | 14.21                 |
|         |         |                 | 16QAM      | 13.45                        | 14.21                 |
| 15      | 19125   | 1902.5          | QPSK       | 13.43                        | 14.22                 |
|         |         |                 | 16QAM      | 13.43                        | 14.21                 |



|    |       |      |       |       |       |
|----|-------|------|-------|-------|-------|
| 20 | 18700 | 1860 | QPSK  | 17.89 | 18.72 |
|    |       |      | 16QAM | 17.88 | 18.73 |
| 20 | 18900 | 1880 | QPSK  | 17.89 | 18.72 |
|    |       |      | 16QAM | 17.89 | 18.73 |
| 20 | 19100 | 1900 | QPSK  | 17.85 | 18.72 |
|    |       |      | 16QAM | 17.86 | 18.73 |

**LTE Band 4 (Part 27):**

| BW(MHz) | Channel | Frequency (MHz) | Modulation | 99% Occupied Bandwidth (MHz) | 26 dB Bandwidth (MHz) |
|---------|---------|-----------------|------------|------------------------------|-----------------------|
| 1.4     | 19957   | 1710.7          | QPSK       | 1.08                         | 1.25                  |
|         |         |                 | 16QAM      | 1.08                         | 1.26                  |
| 1.4     | 2.175   | 1732.5          | QPSK       | 1.09                         | 1.25                  |
|         |         |                 | 16QAM      | 1.09                         | 1.24                  |
| 1.4     | 20393   | 1754.3          | QPSK       | 1.09                         | 1.26                  |
|         |         |                 | 16QAM      | 1.08                         | 1.26                  |
| 3       | 19965   | 1711.5          | QPSK       | 2.67                         | 2.83                  |
|         |         |                 | 16QAM      | 2.67                         | 2.83                  |
| 3       | 2.175   | 1732.5          | QPSK       | 2.68                         | 2.83                  |
|         |         |                 | 16QAM      | 2.68                         | 2.83                  |
| 3       | 2.385   | 1753.5          | QPSK       | 2.68                         | 2.83                  |
|         |         |                 | 16QAM      | 2.68                         | 2.84                  |
| 5       | 19975   | 1712.5          | QPSK       | 4.49                         | 4.78                  |
|         |         |                 | 16QAM      | 4.49                         | 4.77                  |
| 5       | 20175   | 1732.5          | QPSK       | 4.49                         | 4.78                  |
|         |         |                 | 16QAM      | 4.49                         | 4.78                  |
| 5       | 20375   | 1752.5          | QPSK       | 4.48                         | 4.77                  |
|         |         |                 | 16QAM      | 4.49                         | 4.78                  |
| 10      | 2000    | 1715            | QPSK       | 8.93                         | 9.35                  |
|         |         |                 | 16QAM      | 8.93                         | 9.32                  |
| 10      | 20175   | 1732.5          | QPSK       | 8.92                         | 9.3                   |
|         |         |                 | 16QAM      | 8.92                         | 9.31                  |
| 10      | 20350   | 1750            | QPSK       | 8.93                         | 9.32                  |
|         |         |                 | 16QAM      | 8.92                         | 9.32                  |

|    |       |        |       |       |       |
|----|-------|--------|-------|-------|-------|
| 15 | 20025 | 1717.5 | QPSK  | 13.45 | 14.23 |
|    |       |        | 16QAM | 13.45 | 14.22 |
| 15 | 20175 | 1732.5 | QPSK  | 13.46 | 14.22 |
|    |       |        | 16QAM | 13.45 | 14.22 |
| 15 | 20325 | 1747.5 | QPSK  | 13.44 | 14.22 |
|    |       |        | 16QAM | 13.45 | 14.23 |
| 20 | 20050 | 1720   | QPSK  | 17.89 | 18.74 |
|    |       |        | 16QAM | 17.89 | 18.75 |
| 20 | 20175 | 1732.5 | QPSK  | 17.88 | 18.73 |
|    |       |        | 16QAM | 17.88 | 18.74 |
| 20 | 20300 | 1745   | QPSK  | 17.86 | 18.73 |
|    |       |        | 16QAM | 17.87 | 18.74 |

**LTE Band 5 (Part 22H):**

| BW(MHz) | Channel | Frequency (MHz) | Modulation | 99% Occupied Bandwidth (MHz) | 26 dB Bandwidth (MHz) |
|---------|---------|-----------------|------------|------------------------------|-----------------------|
| 1.4     | 20407   | 824.7           | QPSK       | 1.08                         | 1.24                  |
|         |         |                 | 16QAM      | 1.08                         | 1.25                  |
| 1.4     | 20525   | 836.5           | QPSK       | 1.08                         | 1.25                  |
|         |         |                 | 16QAM      | 1.09                         | 1.24                  |
| 1.4     | 20643   | 848.3           | QPSK       | 1.09                         | 1.25                  |
|         |         |                 | 16QAM      | 1.08                         | 1.26                  |
| 3       | 20415   | 825.5           | QPSK       | 2.67                         | 2.82                  |
|         |         |                 | 16QAM      | 2.67                         | 2.82                  |
| 3       | 20525   | 836.5           | QPSK       | 2.68                         | 2.83                  |
|         |         |                 | 16QAM      | 2.68                         | 2.83                  |
| 3       | 20635   | 847.5           | QPSK       | 2.68                         | 2.84                  |
|         |         |                 | 16QAM      | 2.68                         | 2.84                  |
| 5       | 20425   | 826.5           | QPSK       | 4.48                         | 4.78                  |
|         |         |                 | 16QAM      | 4.48                         | 4.76                  |
| 5       | 20525   | 836.5           | QPSK       | 4.49                         | 4.78                  |
|         |         |                 | 16QAM      | 4.49                         | 4.78                  |
| 5       | 20625   | 846.5           | QPSK       | 4.48                         | 4.77                  |
|         |         |                 | 16QAM      | 4.48                         | 4.79                  |

|    |       |       |       |      |      |
|----|-------|-------|-------|------|------|
| 10 | 20450 | 829.0 | QPSK  | 8.92 | 9.31 |
|    |       |       | 16QAM | 8.91 | 9.3  |
| 10 | 20525 | 836.5 | QPSK  | 8.92 | 9.3  |
|    |       |       | 16QAM | 8.92 | 9.29 |
| 10 | 20600 | 844.0 | QPSK  | 8.92 | 9.3  |
|    |       |       | 16QAM | 8.92 | 9.31 |

**LTE Band 7 (Part 27):**

| BW(MHz) | Channel | Frequency (MHz) | Modulation | 99% Occupied Bandwidth (MHz) | 26 dB Bandwidth (MHz) |
|---------|---------|-----------------|------------|------------------------------|-----------------------|
| 5       | 20775   | 2502.5          | QPSK       | 4.49                         | 4.79                  |
|         |         |                 | 16QAM      | 4.49                         | 4.77                  |
| 5       | 21100   | 2535            | QPSK       | 4.49                         | 4.78                  |
|         |         |                 | 16QAM      | 4.49                         | 4.78                  |
| 5       | 21425   | 2567.5          | QPSK       | 4.48                         | 4.77                  |
|         |         |                 | 16QAM      | 4.49                         | 4.78                  |
| 10      | 20850   | 2510            | QPSK       | 8.93                         | 9.32                  |
|         |         |                 | 16QAM      | 8.92                         | 9.31                  |
| 10      | 21100   | 2535            | QPSK       | 8.92                         | 9.32                  |
|         |         |                 | 16QAM      | 8.92                         | 9.31                  |
| 10      | 21400   | 2565            | QPSK       | 8.93                         | 9.32                  |
|         |         |                 | 16QAM      | 8.92                         | 9.33                  |
| 15      | 20800   | 2505            | QPSK       | 13.44                        | 14.24                 |
|         |         |                 | 16QAM      | 13.44                        | 14.22                 |
| 15      | 21100   | 2535            | QPSK       | 13.46                        | 14.22                 |
|         |         |                 | 16QAM      | 13.44                        | 14.22                 |
| 15      | 21375   | 2562.5          | QPSK       | 13.45                        | 14.24                 |
|         |         |                 | 16QAM      | 13.45                        | 14.23                 |
| 20      | 20825   | 2507.5          | QPSK       | 17.87                        | 18.73                 |
|         |         |                 | 16QAM      | 17.86                        | 18.72                 |
| 20      | 21100   | 2535            | QPSK       | 17.88                        | 18.73                 |
|         |         |                 | 16QAM      | 17.87                        | 18.74                 |

|    |       |      |       |       |       |
|----|-------|------|-------|-------|-------|
| 20 | 21350 | 2560 | QPSK  | 17.88 | 18.75 |
|    |       |      | 16QAM | 17.89 | 18.75 |

**LTE Band 12 (Part 27):**

| BW(MHz) | Channel | Frequency (MHz) | Modulation | 99% Occupied Bandwidth (MHz) | 26 dB Bandwidth (MHz) |
|---------|---------|-----------------|------------|------------------------------|-----------------------|
| 1.4     | 23017   | 699.7           | QPSK       | 1.08                         | 1.25                  |
|         |         |                 | 16QAM      | 1.08                         | 1.27                  |
| 1.4     | 23095   | 707.5           | QPSK       | 1.08                         | 1.24                  |
|         |         |                 | 16QAM      | 1.09                         | 1.24                  |
| 1.4     | 23173   | 715.3           | QPSK       | 1.09                         | 1.25                  |
|         |         |                 | 16QAM      | 1.09                         | 1.26                  |
| 3       | 23025   | 700.5           | QPSK       | 2.67                         | 2.83                  |
|         |         |                 | 16QAM      | 2.67                         | 2.82                  |
| 3       | 23095   | 707.5           | QPSK       | 2.68                         | 2.83                  |
|         |         |                 | 16QAM      | 2.68                         | 2.84                  |
| 3       | 23165   | 714.5           | QPSK       | 2.68                         | 2.83                  |
|         |         |                 | 16QAM      | 2.67                         | 2.83                  |
| 5       | 23035   | 701.5           | QPSK       | 4.49                         | 4.87                  |
|         |         |                 | 16QAM      | 4.49                         | 4.84                  |
| 5       | 23095   | 707.5           | QPSK       | 4.49                         | 4.89                  |
|         |         |                 | 16QAM      | 4.49                         | 4.9                   |
| 5       | 23155   | 713.5           | QPSK       | 4.48                         | 4.86                  |
|         |         |                 | 16QAM      | 4.48                         | 4.87                  |
| 10      | 23060   | 704             | QPSK       | 8.92                         | 9.39                  |
|         |         |                 | 16QAM      | 8.91                         | 9.38                  |
| 10      | 23095   | 707.5           | QPSK       | 8.91                         | 9.37                  |
|         |         |                 | 16QAM      | 8.91                         | 9.34                  |
| 10      | 23130   | 711             | QPSK       | 8.93                         | 9.36                  |
|         |         |                 | 16QAM      | 8.92                         | 9.38                  |

**LTE Band 13 (Part 27)**

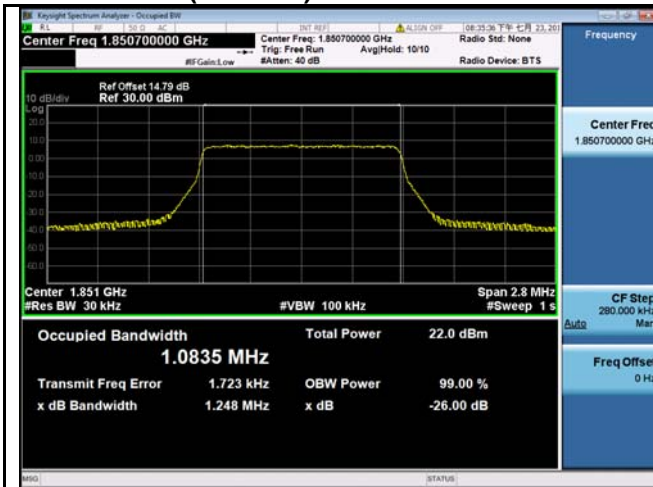
| BW(MHz) | Channel | Frequency (MHz) | Modulation | 99% Occupied Bandwidth (MHz) | 26 dB Bandwidth (MHz) |
|---------|---------|-----------------|------------|------------------------------|-----------------------|
| 5       | 23205   | 779.5           | QPSK       | 4.5                          | 4.9                   |
|         |         |                 | 16QAM      | 4.49                         | 4.84                  |
| 5       | 23230   | 782.0           | QPSK       | 4.49                         | 4.89                  |
|         |         |                 | 16QAM      | 4.49                         | 4.87                  |
| 5       | 23255   | 784.5           | QPSK       | 4.48                         | 4.83                  |
|         |         |                 | 16QAM      | 4.48                         | 4.88                  |
| 10      | 23230   | 782.0           | QPSK       | 8.93                         | 9.36                  |
|         |         |                 | 16QAM      | 8.92                         | 9.4                   |

**LTE Band 66 (Part 27):**

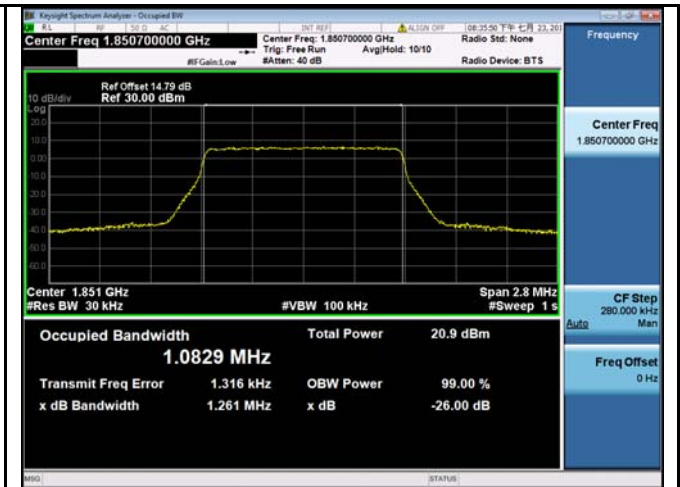
| BW(MHz) | Channel | Frequency (MHz) | Modulation | 99% Occupied Bandwidth (MHz) | 26 dB Bandwidth (MHz) |
|---------|---------|-----------------|------------|------------------------------|-----------------------|
| 1.4     | 131979  | 1701.7          | QPSK       | 1.08                         | 1.24                  |
|         |         |                 | 16QAM      | 1.08                         | 1.26                  |
| 1.4     | 132321  | 1744.9          | QPSK       | 1.08                         | 1.25                  |
|         |         |                 | 16QAM      | 1.08                         | 1.24                  |
| 1.4     | 132664  | 1779.2          | QPSK       | 1.09                         | 1.25                  |
|         |         |                 | 16QAM      | 1.08                         | 1.26                  |
| 3       | 131987  | 1711.5          | QPSK       | 2.67                         | 2.83                  |
|         |         |                 | 16QAM      | 2.67                         | 2.82                  |
| 3       | 132321  | 1744.9          | QPSK       | 2.68                         | 2.83                  |
|         |         |                 | 16QAM      | 2.68                         | 2.83                  |
| 3       | 132656  | 1778.4          | QPSK       | 2.68                         | 2.84                  |
|         |         |                 | 16QAM      | 2.68                         | 2.84                  |
| 5       | 131997  | 1712.5          | QPSK       | 4.49                         | 4.88                  |
|         |         |                 | 16QAM      | 4.49                         | 4.86                  |
| 5       | 132321  | 1744.9          | QPSK       | 4.49                         | 4.86                  |
|         |         |                 | 16QAM      | 4.49                         | 4.87                  |
| 5       | 132646  | 1777.4          | QPSK       | 4.48                         | 4.84                  |
|         |         |                 | 16QAM      | 4.49                         | 4.88                  |
| 10      | 132022  | 1715            | QPSK       | 8.93                         | 9.41                  |

|    |        |        |       |       |       |
|----|--------|--------|-------|-------|-------|
|    |        |        | 16QAM | 8.92  | 9.42  |
| 10 | 132321 | 1744.9 | QPSK  | 8.92  | 9.39  |
|    |        |        | 16QAM | 8.92  | 9.38  |
| 10 | 132621 | 1774.9 | QPSK  | 8.93  | 9.39  |
|    |        |        | 16QAM | 8.92  | 9.42  |
| 15 | 132097 | 1722.5 | QPSK  | 13.45 | 14.26 |
|    |        |        | 16QAM | 13.46 | 14.26 |
| 15 | 132321 | 1744.9 | QPSK  | 13.46 | 14.25 |
|    |        |        | 16QAM | 13.44 | 14.25 |
| 15 | 132546 | 1767.4 | QPSK  | 13.45 | 14.27 |
|    |        |        | 16QAM | 13.46 | 14.26 |
| 20 | 132072 | 1720   | QPSK  | 17.89 | 18.77 |
|    |        |        | 16QAM | 17.89 | 18.78 |
| 20 | 132321 | 1744.9 | QPSK  | 17.87 | 18.74 |
|    |        |        | 16QAM | 17.86 | 18.75 |
| 20 | 132471 | 1759.9 | QPSK  | 17.89 | 18.78 |
|    |        |        | 16QAM | 17.9  | 18.79 |

**Test Plots**  
**LTE Band 2 (Part 24E)**



LTE band 2 - Low CH QPSK-1.4



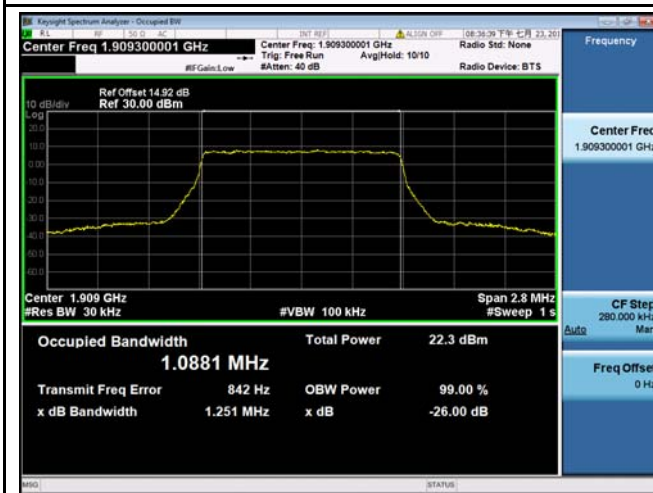
LTE band 2 - Low CH 16QAM-1.4



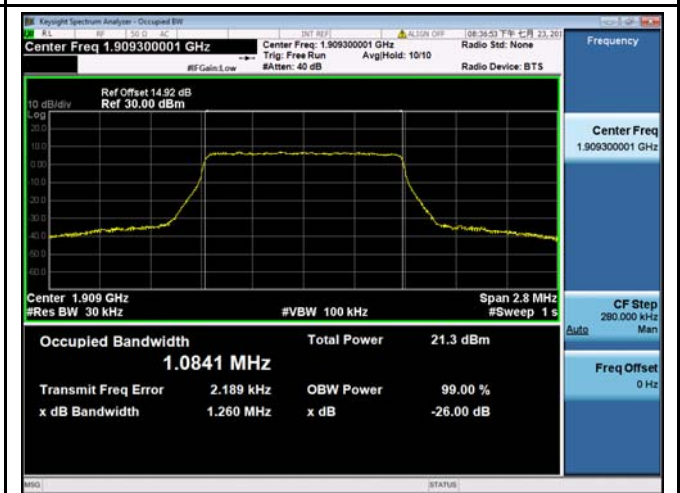
LTE band 2 - Middle CH QPSK-1.4



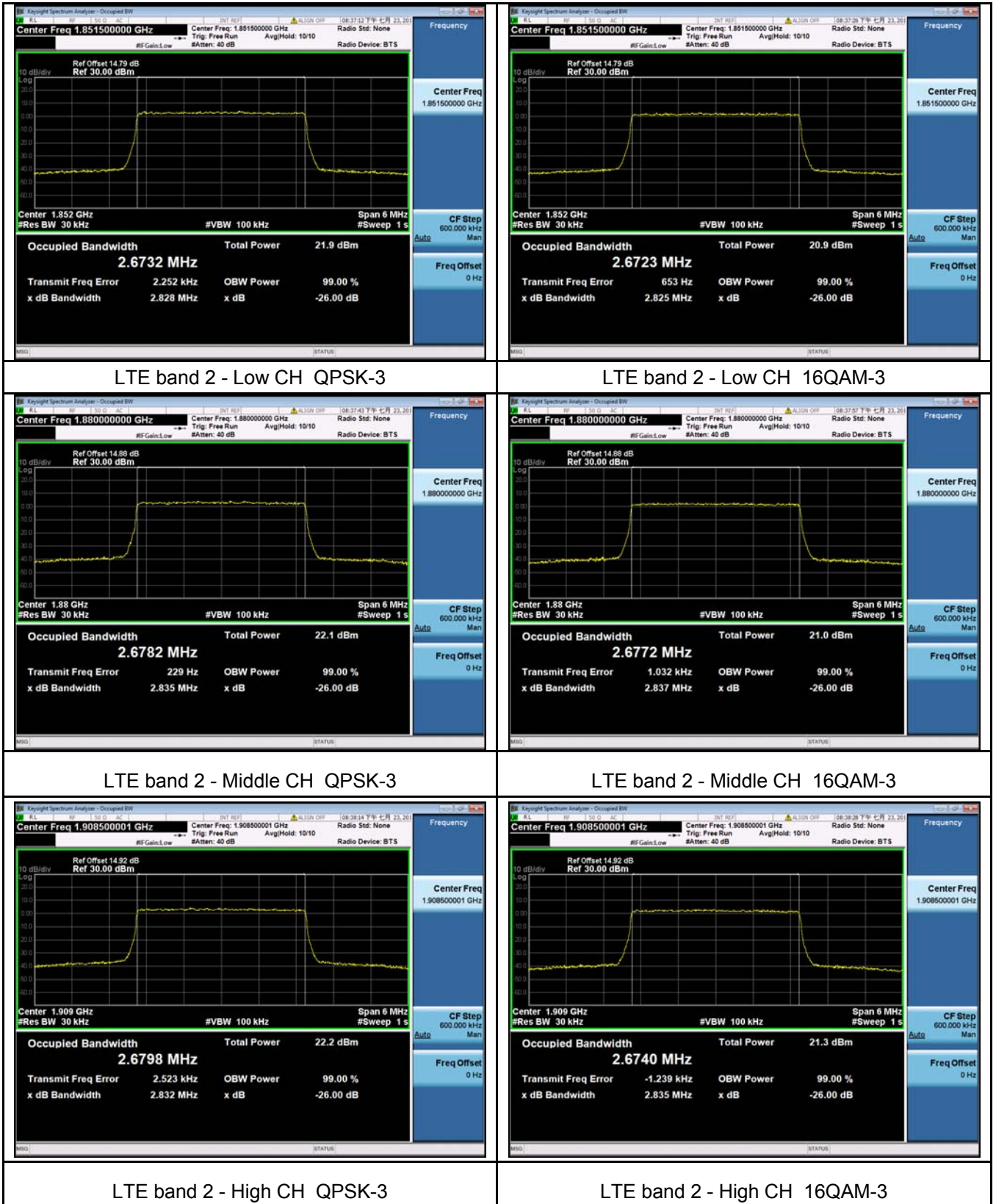
LTE band 2 - Middle CH 16QAM-1.4



LTE band 2 - High CH QPSK-1.4



LTE band 2 - High CH 16QAM-1.4

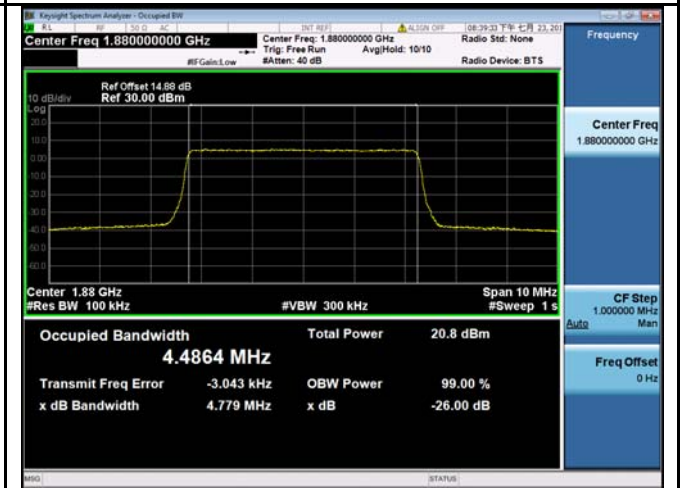
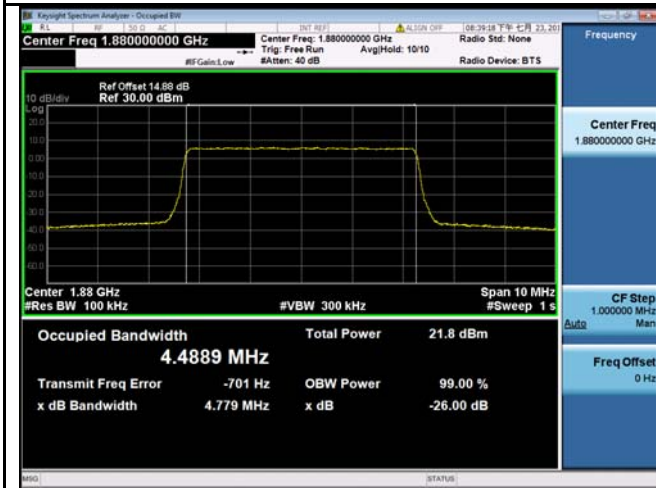






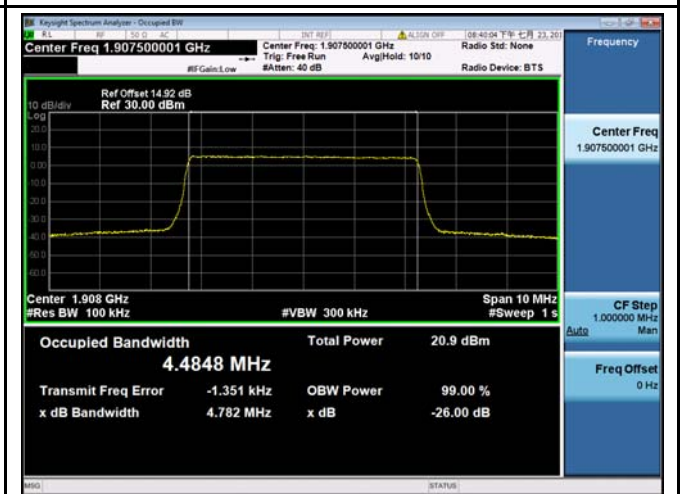
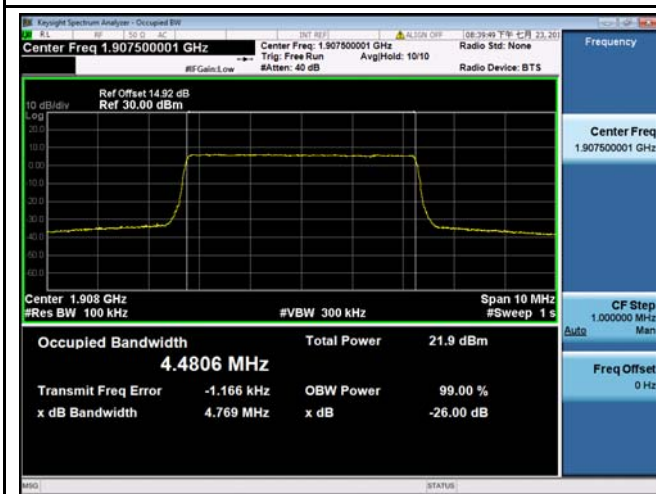
LTE band 2 - Low CH QPSK-5

LTE band 2 - Low CH 16QAM-5



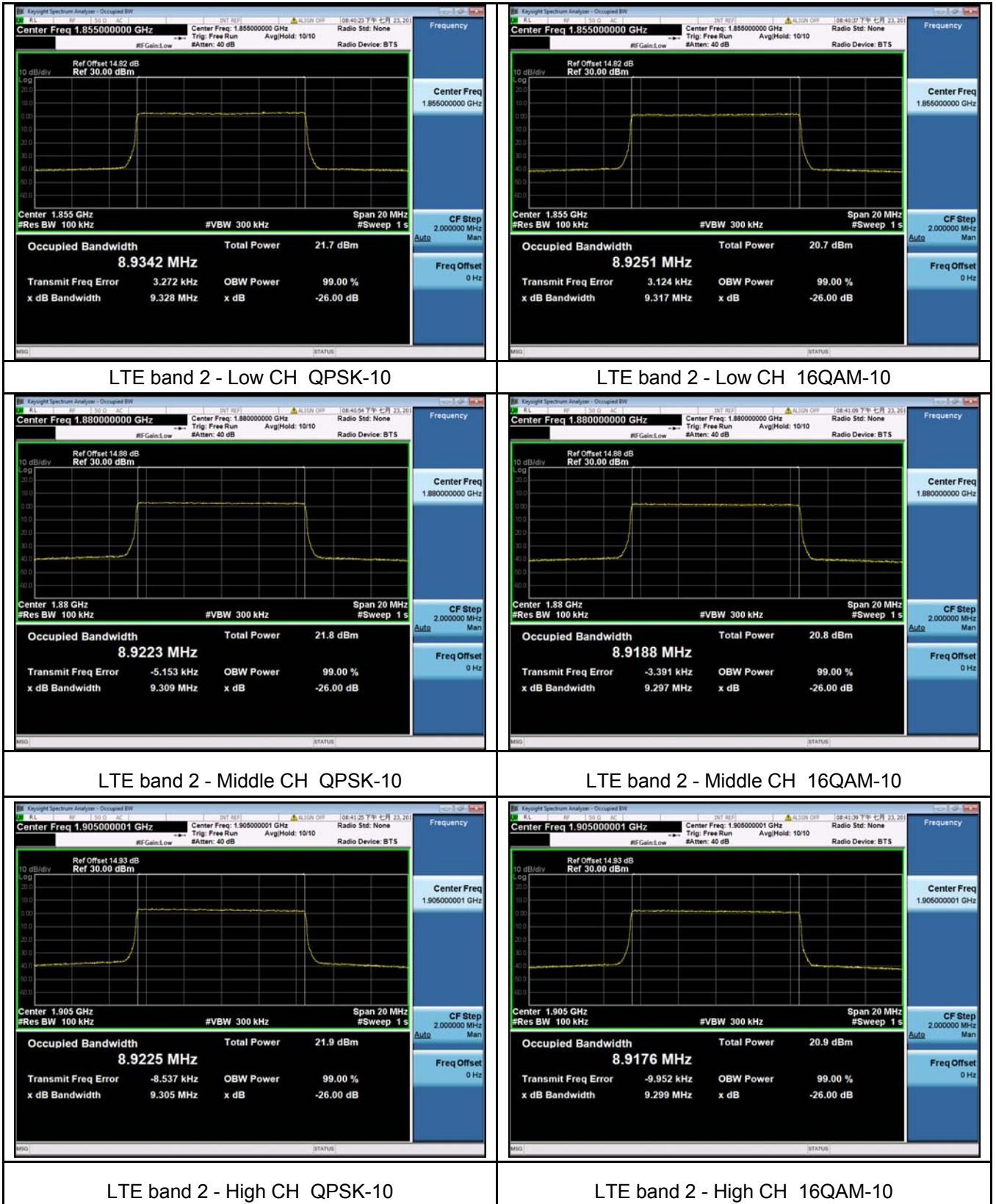
LTE band 2 - Middle CH QPSK-5

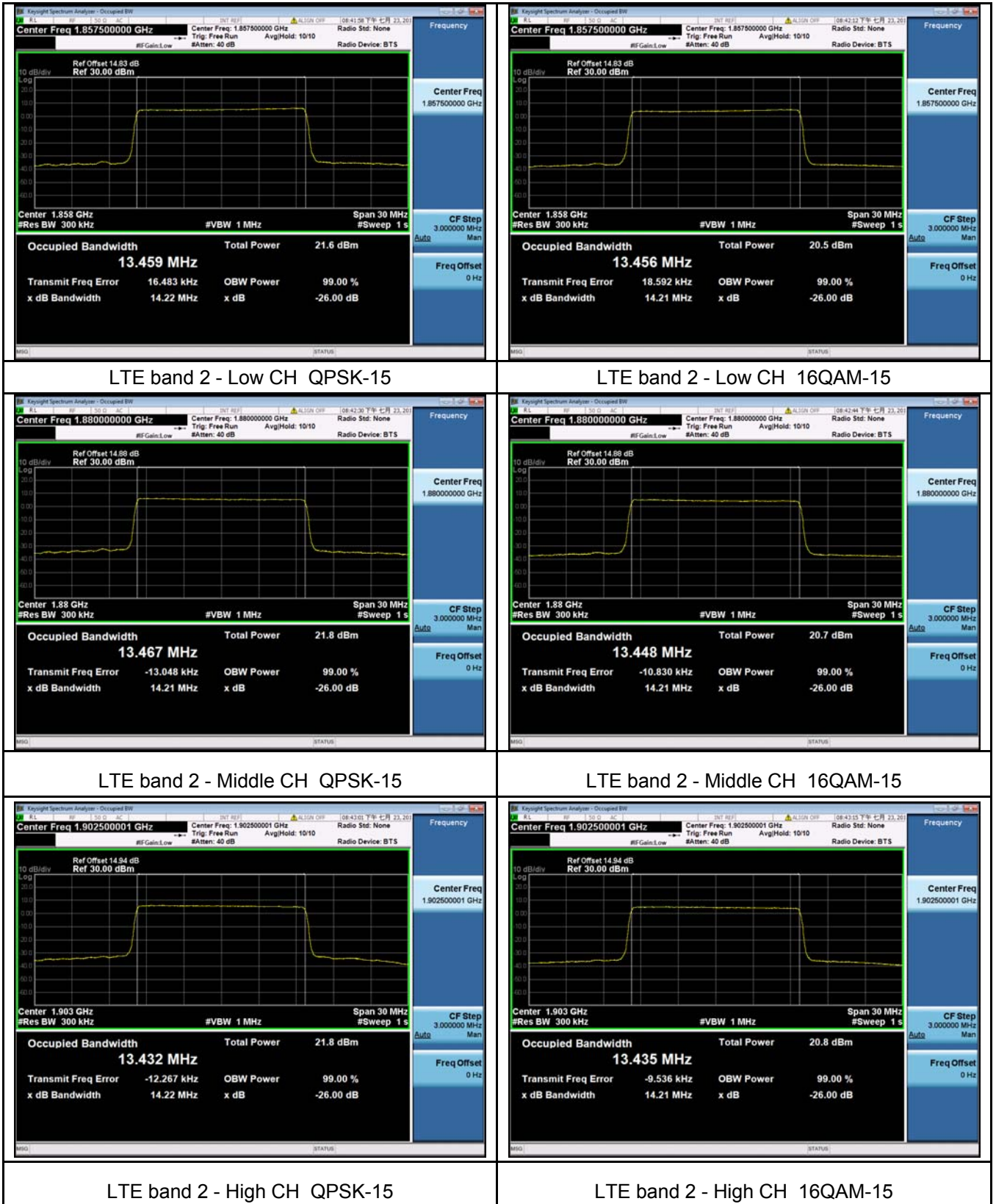
LTE band 2 - Middle CH 16QAM-5



LTE band 2 - High CH QPSK-5

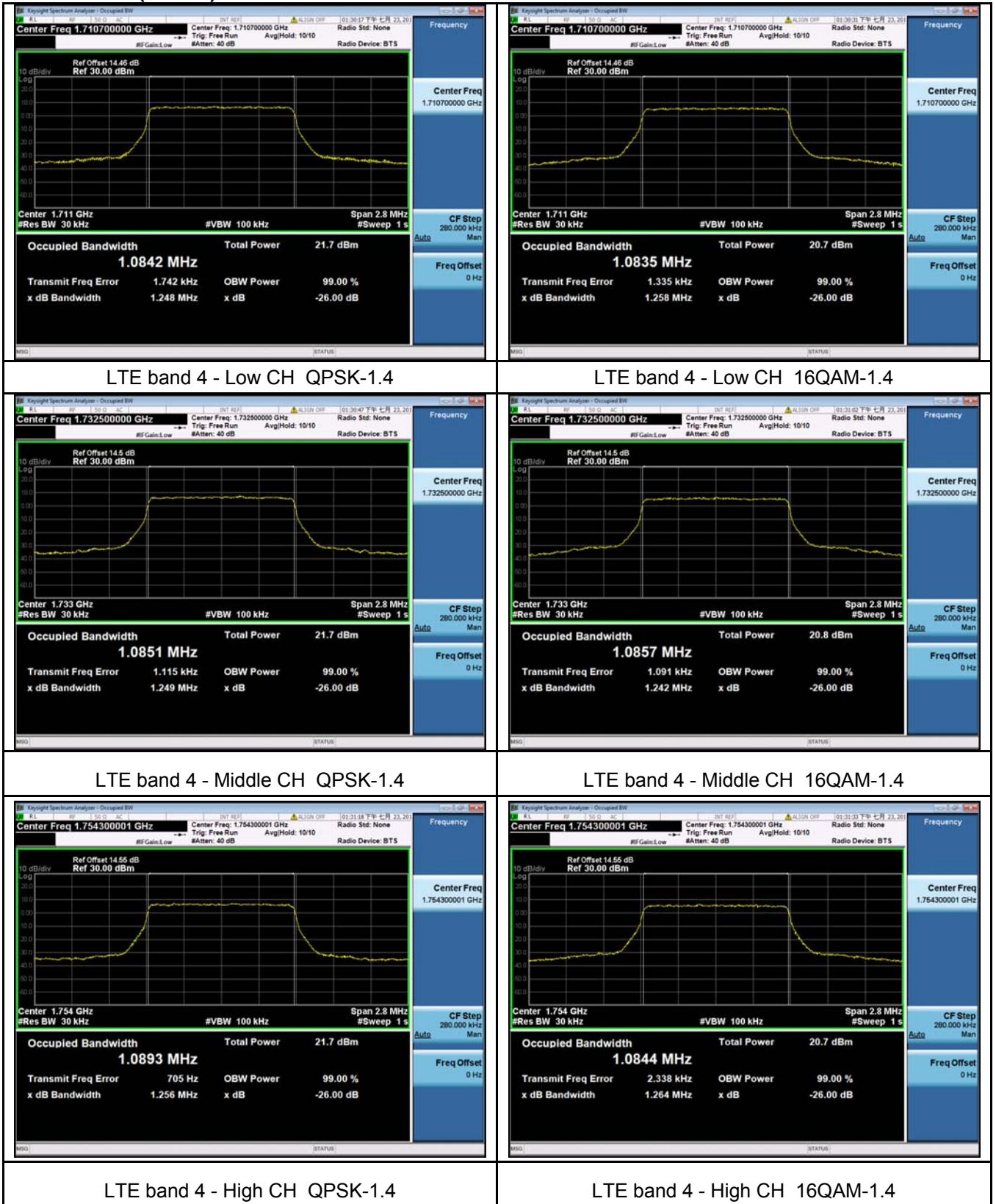
LTE band 2 - High CH 16QAM-5







LTE Band 4 (Part 27)





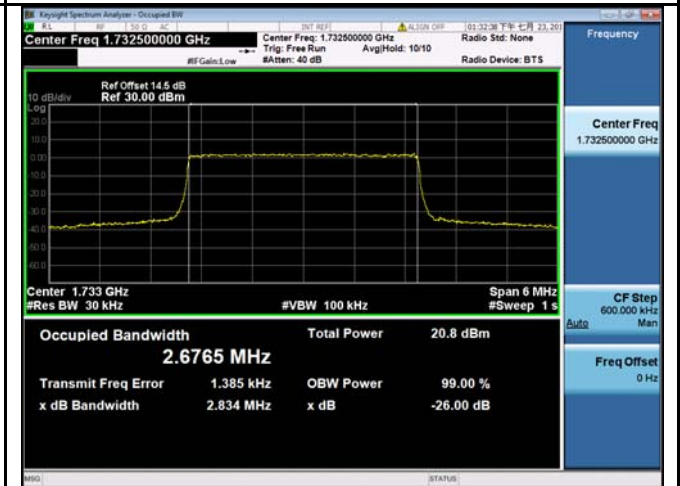
LTE band 4 - Low CH QPSK-3



LTE band 4 - Low CH 16QAM-3



LTE band 4 - Middle CH QPSK-3



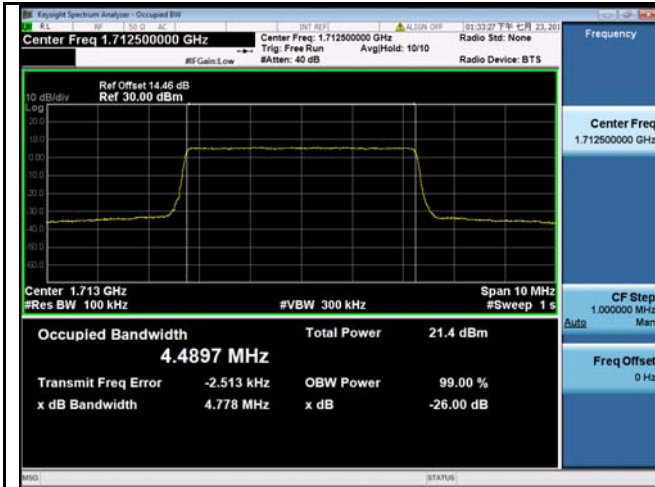
LTE band 4 - Middle CH 16QAM-3



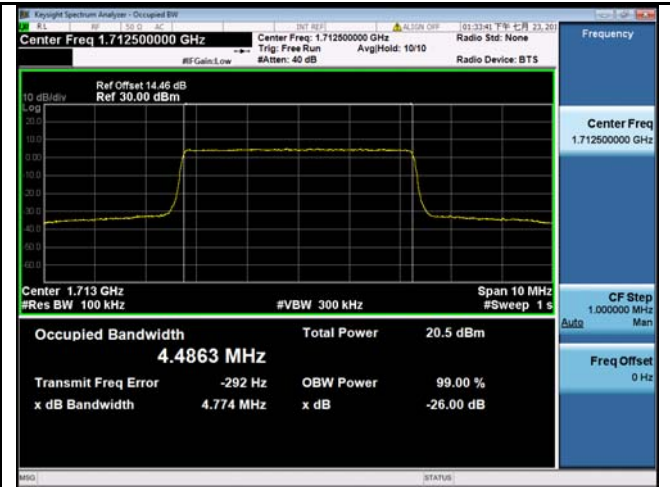
LTE band 4 - High CH QPSK-3



LTE band 4 - High CH 16QAM-3



LTE band 4 - Low CH QPSK-5



LTE band 4 - Low CH 16QAM-5



LTE band 4 - Middle CH QPSK-5



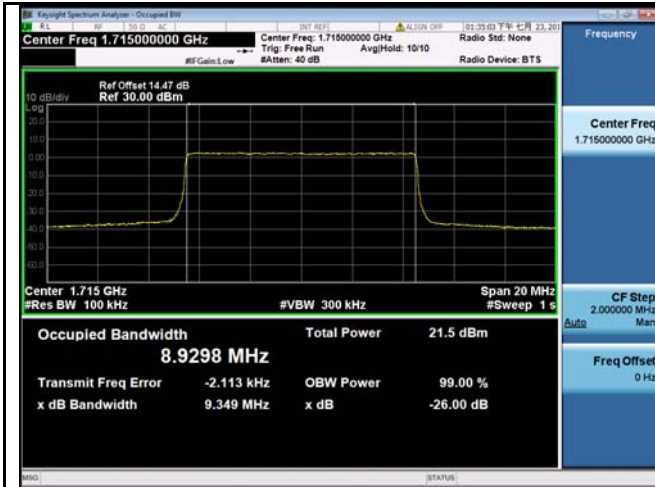
LTE band 4 - Middle CH 16QAM-5



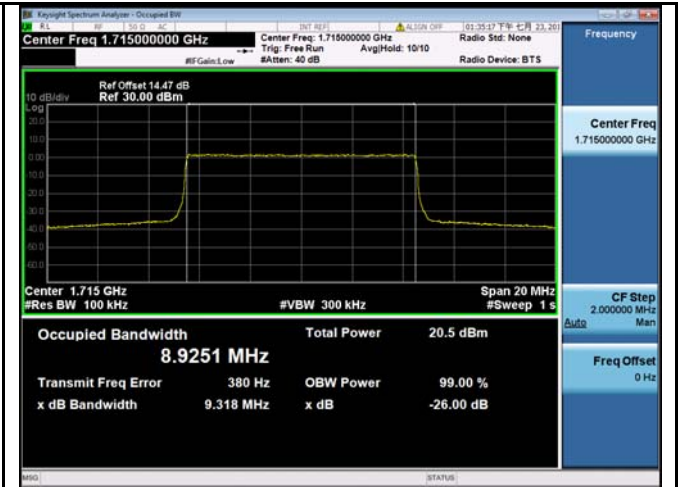
LTE band 4 - High CH QPSK-5



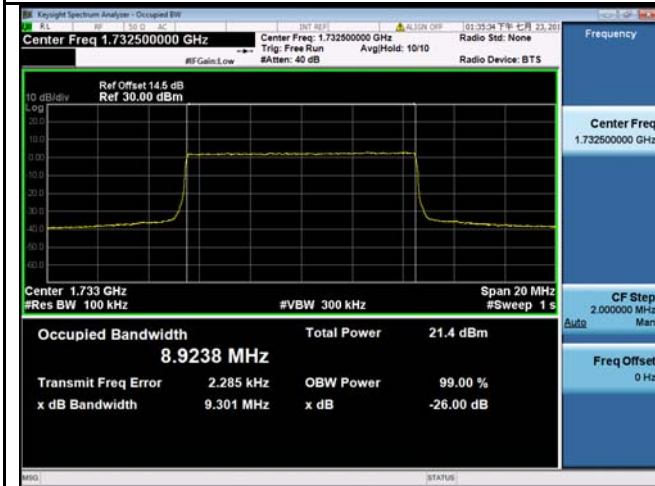
LTE band 4 - High CH 16QAM-5



LTE band 4 - Low CH QPSK-10



LTE band 4 - Low CH 16QAM-10



LTE band 4 - Middle CH QPSK-10



LTE band 4 - Middle CH 16QAM-10

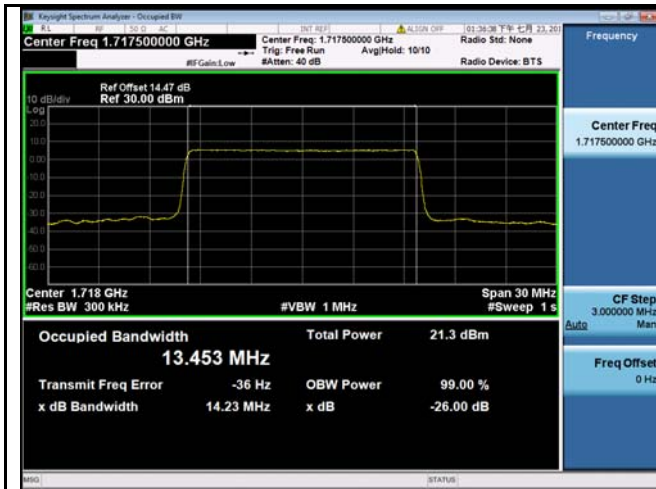


LTE band 4 - High CH QPSK-10



LTE band 4 - High CH 16QAM-10

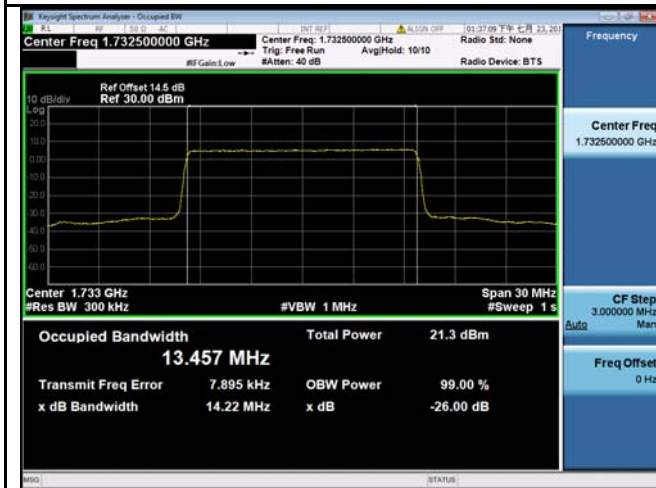




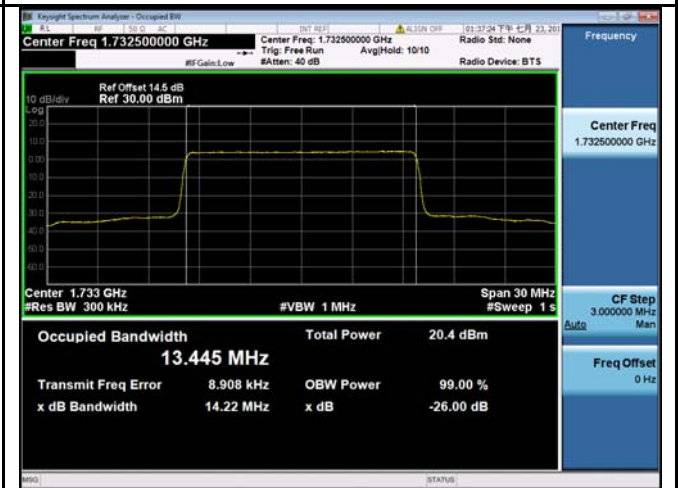
LTE band 4 - Low CH QPSK-15



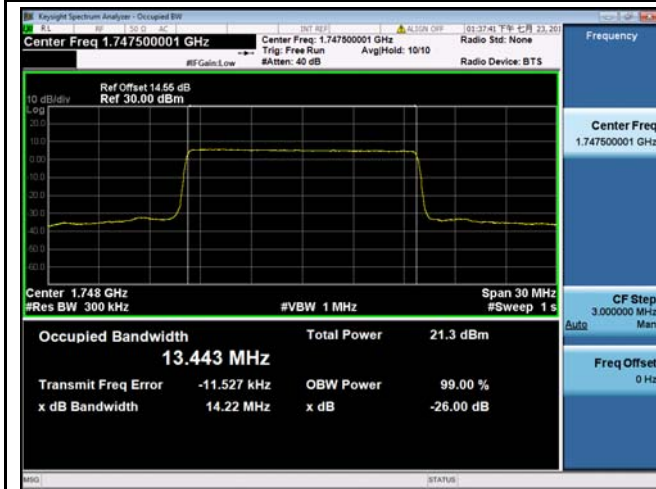
LTE band 4 - Low CH 16QAM-15



LTE band 4 - Middle CH QPSK-15



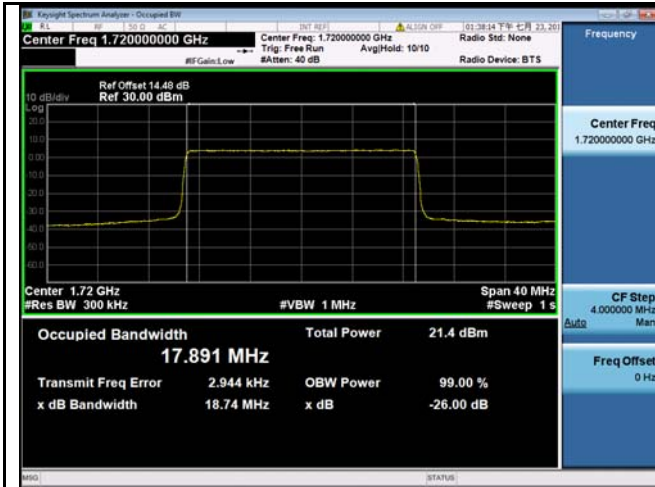
LTE band 4 - Middle CH 16QAM-15



LTE band 4 - High CH QPSK-15



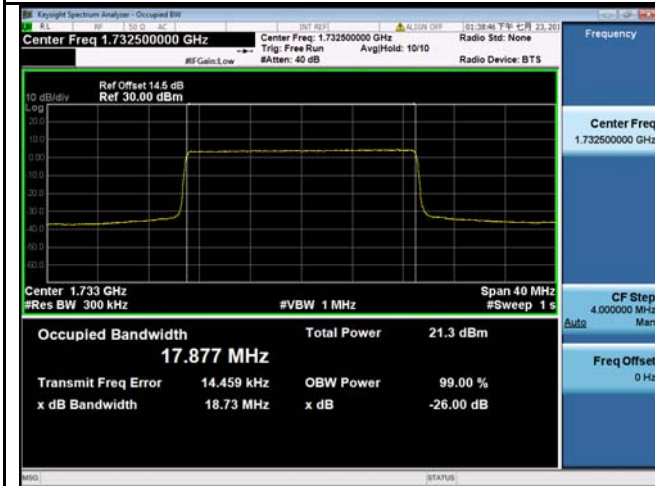
LTE band 4 - High CH 16QAM-15



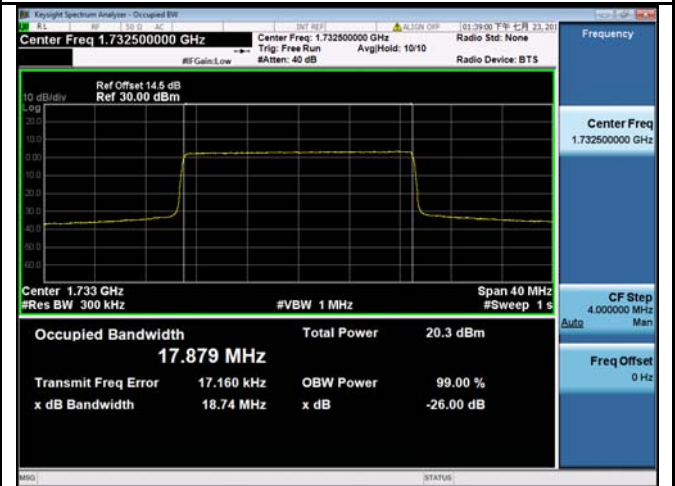
LTE band 4 - Low CH QPSK-20



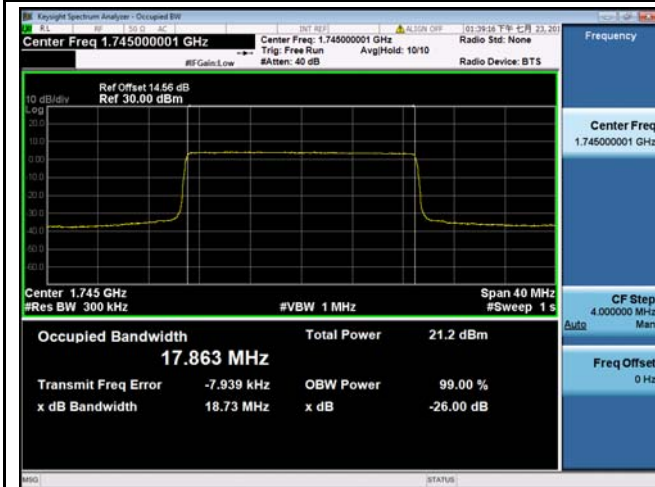
LTE band 4 - Low CH 16QAM-20



LTE band 4 - Middle CH QPSK-20



LTE band 4 - Middle CH 16QAM-20



LTE band 4 - High CH QPSK-20



LTE band 4 - High CH 16QAM-20

LTE Band 5 (Part 22H)



LTE band 5 - Low CH QPSK-1.4



LTE band 5 - Low CH 16QAM-1.4



LTE band 5 - Middle CH QPSK-1.4



LTE band 5 - Middle CH 16QAM-1.4



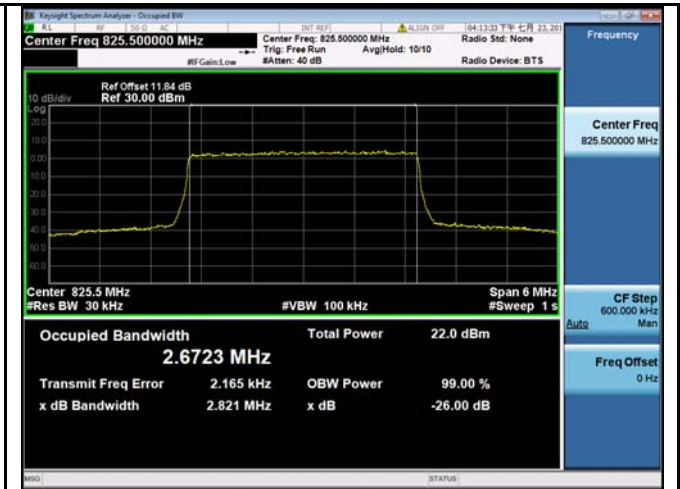
LTE band 5 - High CH QPSK-1.4



LTE band 5 - High CH 16QAM-1.4



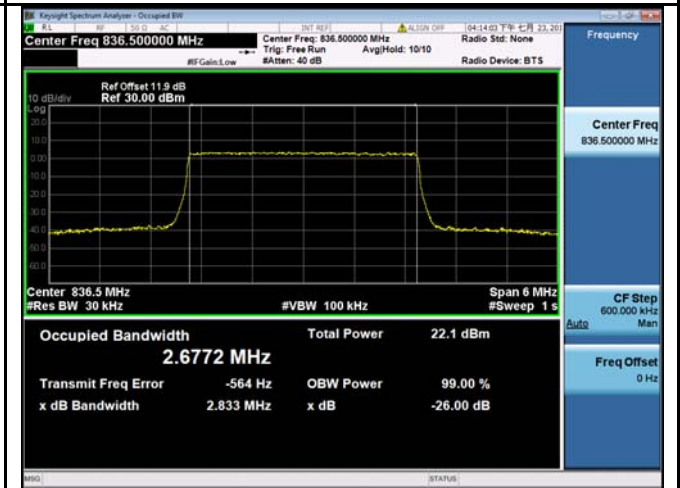
LTE band 5 - Low CH QPSK-3



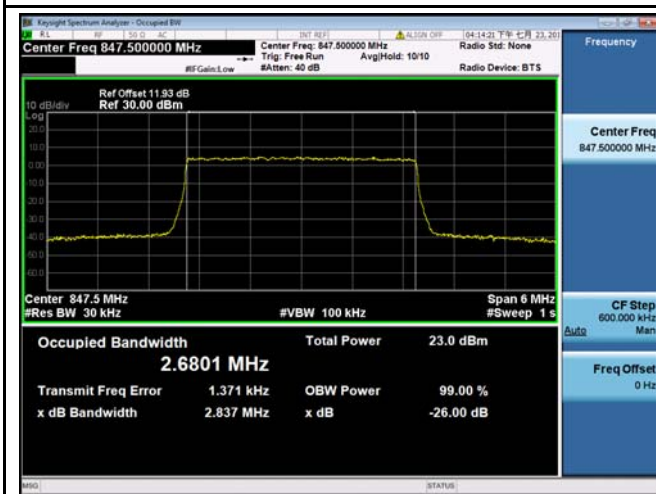
LTE band 5 - Low CH 16QAM-3



LTE band 5 - Middle CH QPSK-3



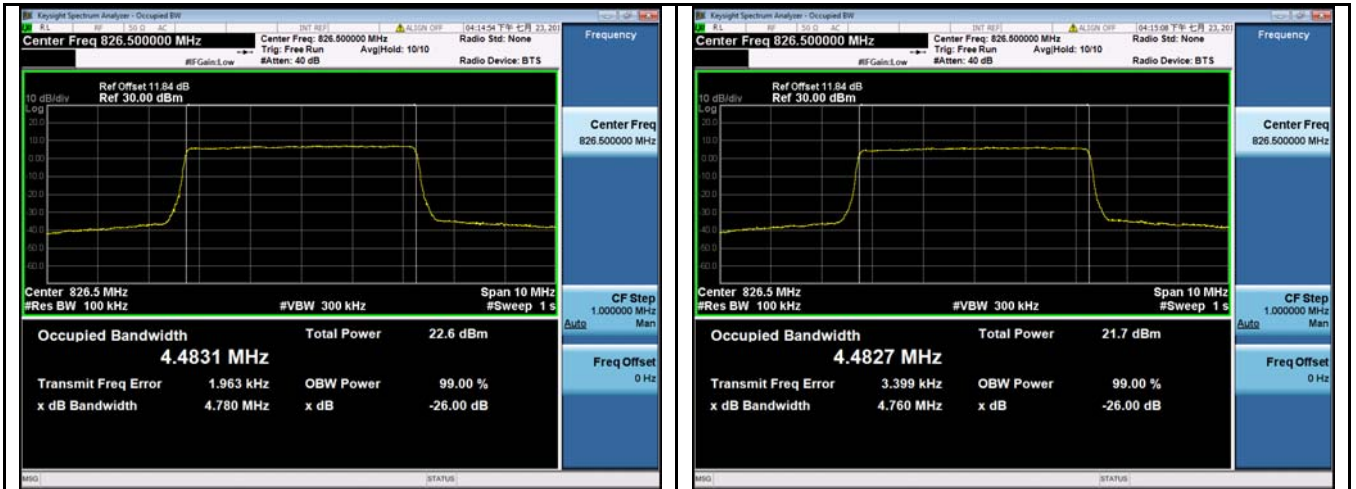
LTE band 5 - Middle CH 16QAM-3



LTE band 5 - High CH QPSK-3

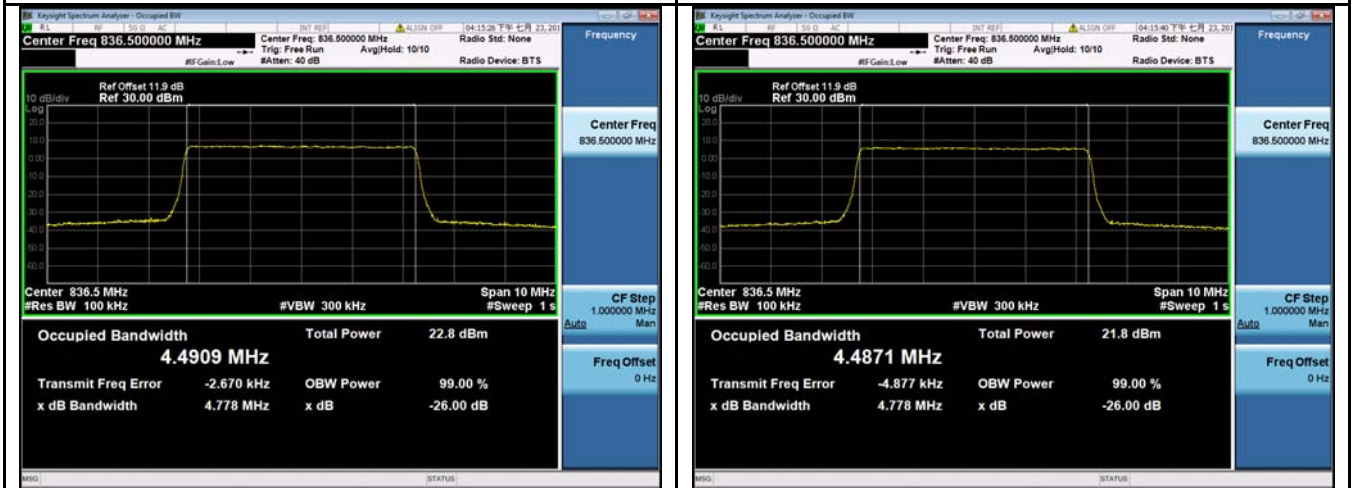


LTE band 5 - High CH 16QAM-3



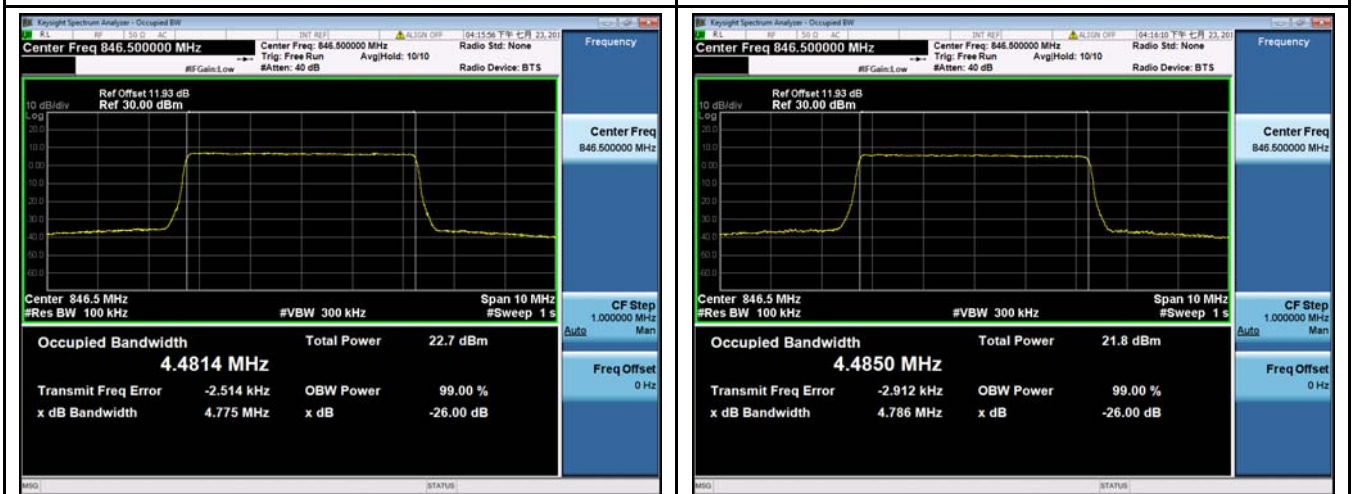
LTE band 5 - Low CH QPSK-5

LTE band 5 - Low CH 16QAM-5



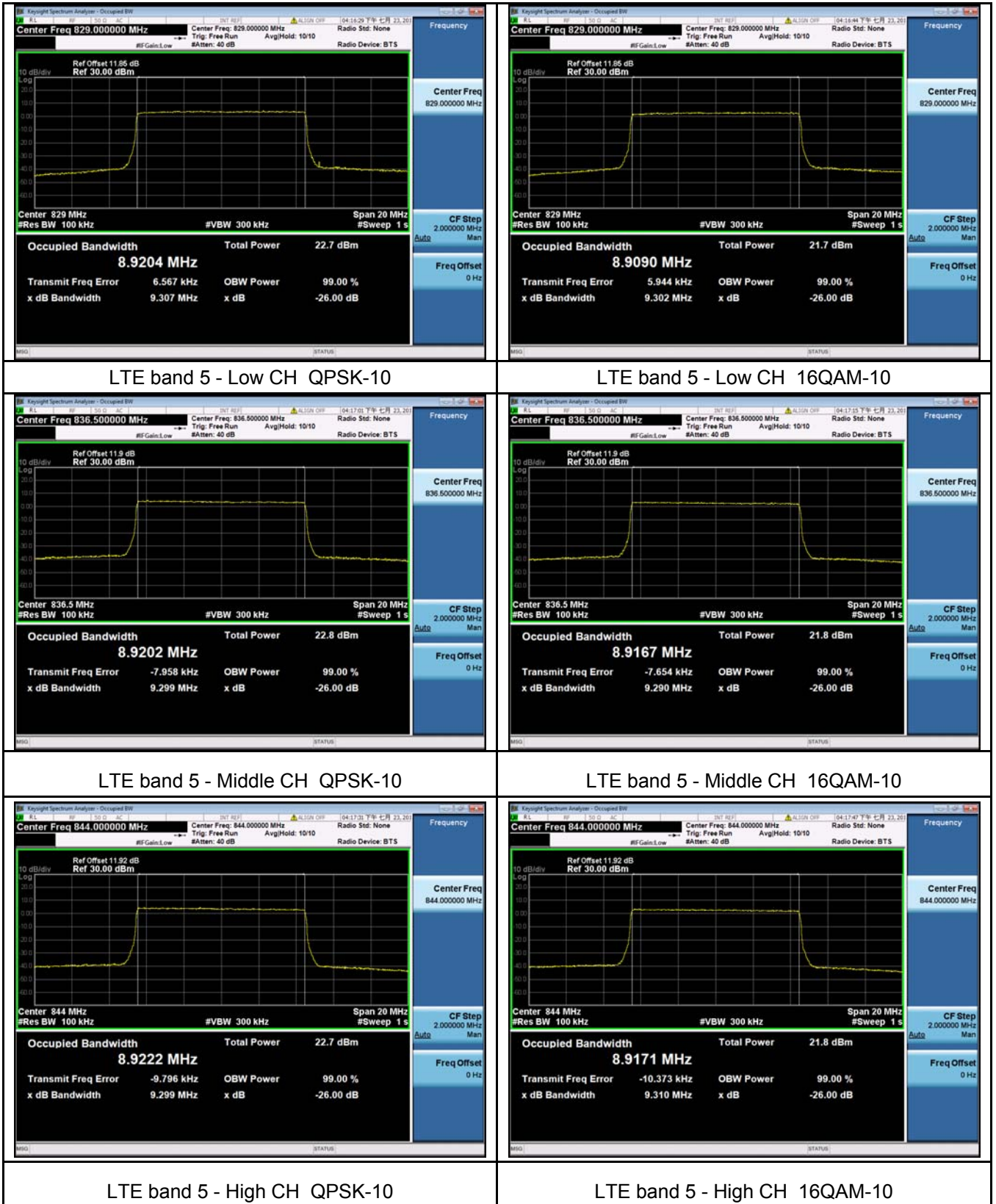
LTE band 5 - Middle CH QPSK-5

LTE band 5 - Middle CH 16QAM-5

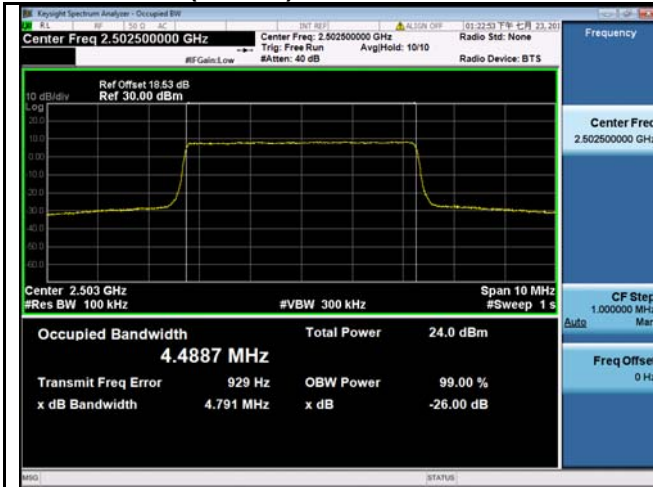


LTE band 5 - High CH QPSK-5

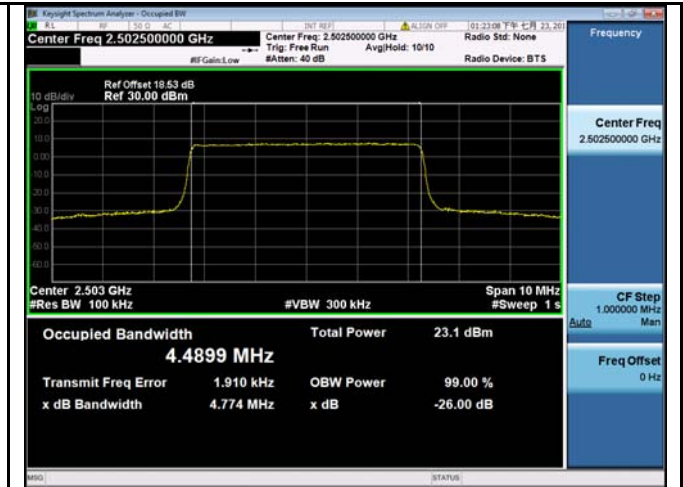
LTE band 5 - High CH 16QAM-5



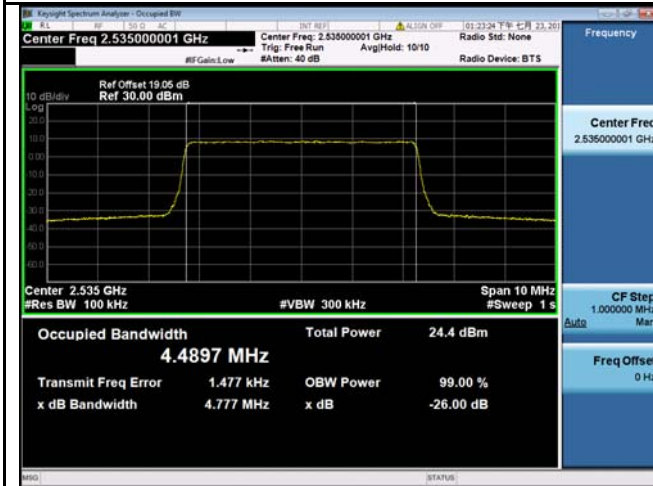
LTE Band 7 (Part 27)



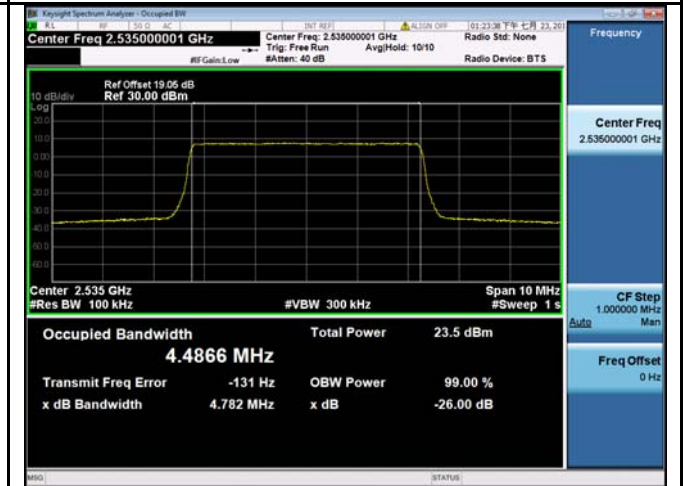
LTE band 7 - Low CH QPSK-5



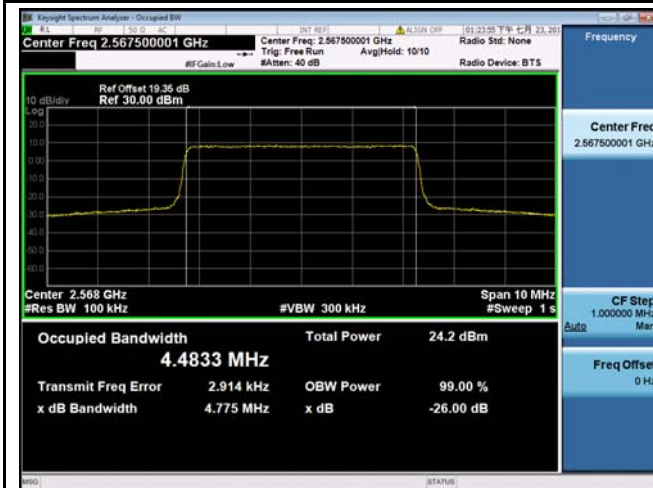
LTE band 7 - Low CH 16QAM-5



LTE band 7 - Middle CH QPSK-5



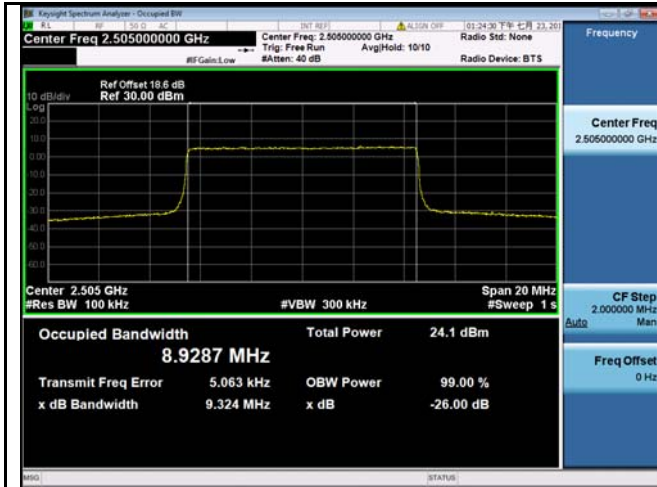
LTE band 7 - Middle CH 16QAM-5



LTE band 7 - High CH QPSK-5



LTE band 7 - High CH 16QAM-5



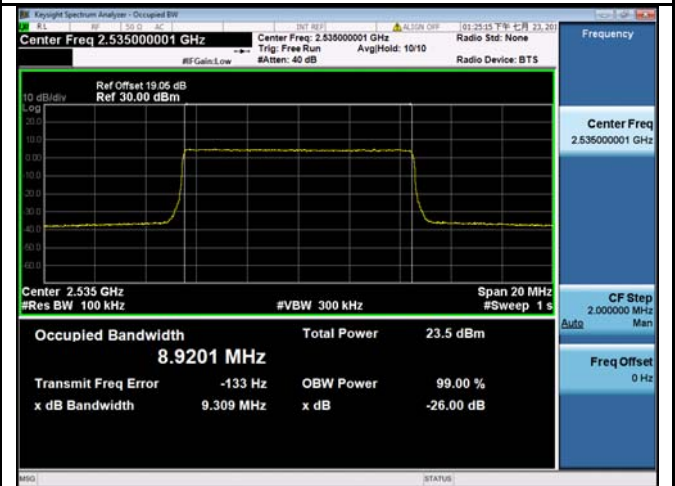
LTE band 7 - Low CH QPSK-10



LTE band 7 - Low CH 16QAM-10



LTE band 7 - Middle CH QPSK-10



LTE band 7 - Middle CH 16QAM-10

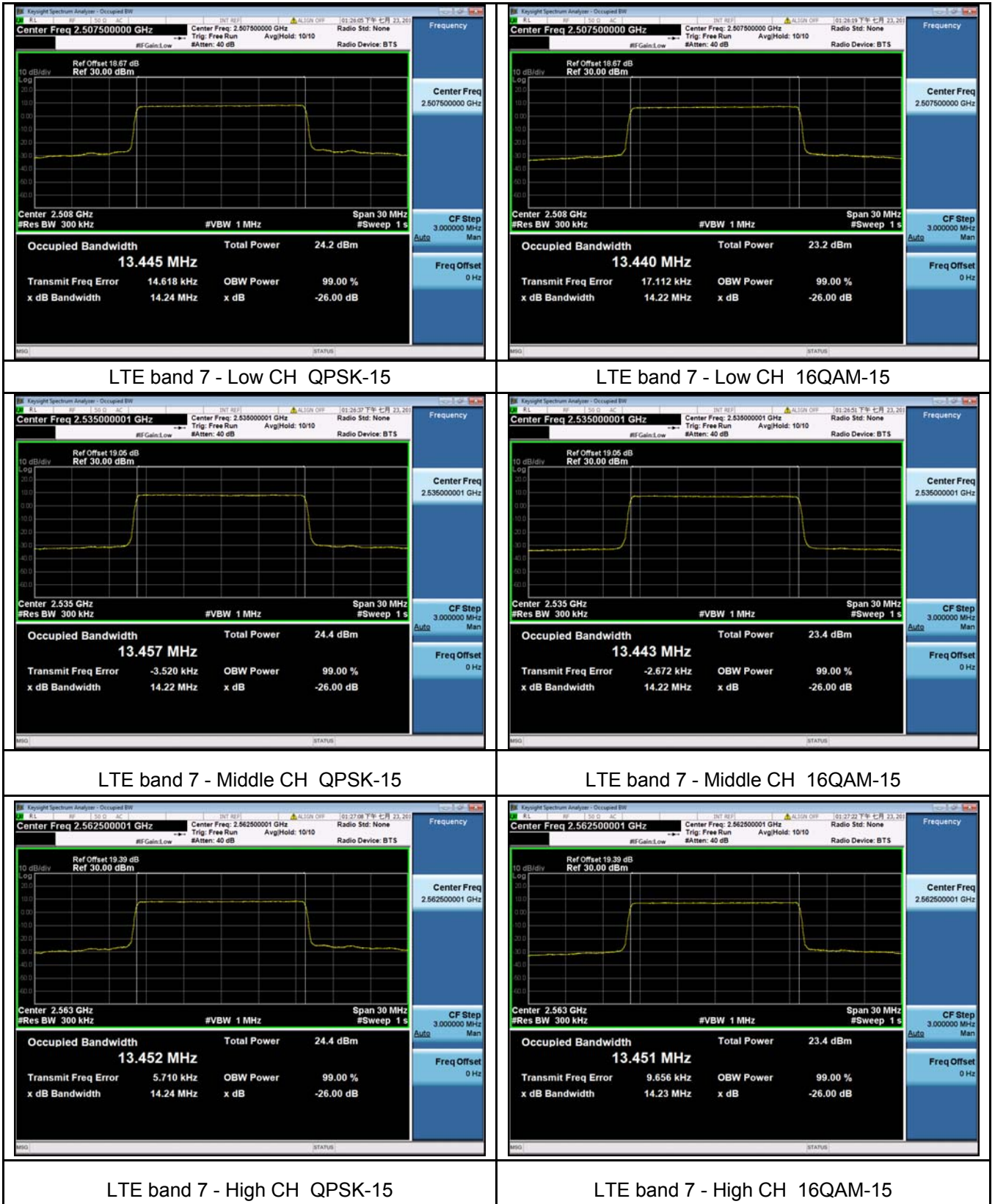


LTE band 7 - High CH QPSK-10



LTE band 7 - High CH 16QAM-10



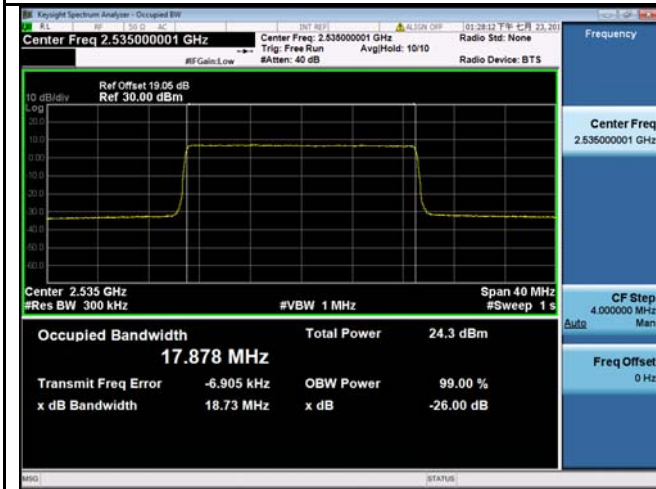




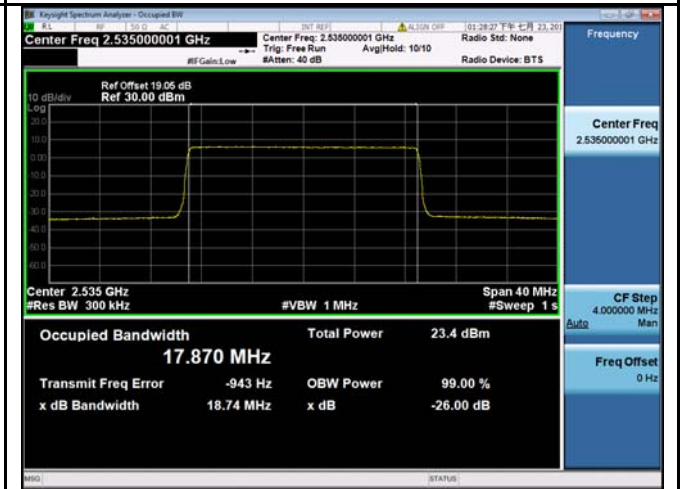
LTE band 7 - Low CH QPSK-20



LTE band 7 - Low CH 16QAM-20



LTE band 7 - Middle CH QPSK-20



LTE band 7 - Middle CH 16QAM-20



LTE band 7 - High CH QPSK-20



LTE band 7 - High CH 16QAM-20