# FCC Test Report
# (ENDC: n71+Band 2/66)

| | |
|---|---|
| **Report No.:** | RFBFJZ-WTW-P21050403-16 |
| **FCC ID:** | V65C6930 |
| **Test Model:** | C6930 |
| **Received Date:** | May 18, 2021 |
| **Test Date:** | Jun. 26 ~ Aug. 06, 2021 |
| **Issued Date:** | Aug. 12, 2021 |
| **Applicant:** | Kyocera Corporation c/o Kyocera International, Inc. |
| **Address:** | 8611 Balboa Avenue, San Diego, CA 92123 |
| **Issued By:** | Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch<br>Lin Kou Laboratories |
| **Lab Address:** | No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan |
| **Test Location:** | No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, Taiwan |
| **FCC Registration / Designation Number:** | 788550 / TW0003 |

Testing Laboratory
2021

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## Release Control Record

| Issue No. | Description | Date Issued |
|---|---|---|
| RFBFJZ-WTW-P21050403-16 | Original release | Aug. 12, 2021 |

## 1 Certificate of Conformity

| | |
|---|---|
| **Product:** | SmartPhone |
| **Brand:** | Kyocera |
| **Test Model:** | C6930 |
| **Sample Status:** | Engineering sample |
| **Applicant:** | Kyocera Corporation c/o Kyocera International, Inc. |
| **Test Date:** | Jun. 26 ~ Aug. 06, 2021 |
| **Standards:** | FCC Part 24, Subpart E<br>FCC Part 27, Subpart C, L, N |

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

**Prepared by :** Pettie Chen , **Date:** Aug. 12, 2021

Pettie Chen / Senior Specialist

**Approved by :** Bruce Chen , **Date:** Aug. 12, 2021

Bruce Chen / Senior Engineer

## 2 Summary of Test Results

For 5GNR n71:

| Applied Standard: FCC Part 27 & Part 2 | | | |
|---|---|---|---|
| FCC Clause | Test Item | Result | Remarks |
| 2.1046<br>27.50<br>(c) | Equivalent Radiated Power | Pass | Meet the requirement of limit. |
| 2.1047 | Modulation Characteristics | Pass | Meet the requirement of limit. |
| ---- | Peak To Average Ratio | Pass | Meet the requirement of limit. |
| 2.1055<br>27.54 | Frequency Stability<br>Stay with the authorized bands of operation | Pass | Meet the requirement of limit. |
| 2.1049 | Occupied Bandwidth | Pass | Meet the requirement of limit. |
| 2.1051<br>27.53<br>(g) | Band Edge / Out of Band Emissions Measurements | Pass | Meet the requirement of limit. |
| 2.1051<br>27.53<br>(g) | Conducted Spurious Emissions | Pass | Meet the requirement of limit. |
| 2.1053<br>27.53<br>(g) | Radiated Spurious Emissions | Pass | Meet the requirement of limit.<br>Minimum passing margin is -39.00dB at 1361.00MHz. |

Note: Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

For LTE Band 2:

| Applied Standard: FCC Part 24 & Part 2 | | | |
|---|---|---|---|
| FCC Clause | Test Item | Result | Remarks |
| 2.1046<br>24.232 | Effective Isotropically Radiated Power | Pass | Meet the requirement of limit. |
| 2.1046<br>24.232(d) | Peak To Average Ratio | Pass | Refer to Note 1 |
| 2.1047 | Modulation Characteristics | Pass | Refer to Note 1 |
| 2.1055<br>24.235 | Frequency Stability | Pass | Refer to Note 1 |
| 2.1049<br>24.238(b) | Occupied Bandwidth | Pass | Refer to Note 1 |
| 24.238(b) | Band Edge Measurements | Pass | Refer to Note 1 |
| 2.1051<br>24.238 | Conducted Spurious Emissions | Pass | Refer to Note 1 |
| 2.1053<br>24.238 | Radiated Spurious Emissions | Pass | Meet the requirement of limit.<br>Minimum passing margin is -32.43dB at 60.07MHz. |

Note:

1. This report is a partial report. Therefore, only test item of Effective Isotropically Radiated Power and Radiated Spurious Emissions tests were performed for this report. Other testing data please refer to BV CPS report no.: RFBFJZ-WTW-P21050403-9.
2. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

For LTE Band 66:

| Applied Standard: FCC Part 27 & Part 2 | | | |
|---|---|---|---|
| FCC Clause | Test Item | Result | Remarks |
| 2.1046<br>27.50<br>(d)(4) | Equivalent Isotropically Radiated Power | Pass | Meet the requirement of limit. |
| 2.1047 | Modulation Characteristics | Pass | Refer to Note 1 |
| 27.50<br>(d)(5) | Peak To Average Ratio | Pass | Refer to Note 1 |
| 2.1055<br>27.54 | Frequency Stability<br>Stay with the authorized bands of operation | Pass | Refer to Note 1 |
| 2.1049 | Occupied Bandwidth | Pass | Refer to Note 1 |
| 2.1051<br>27.53<br>(h) | Band Edge Measurements | Pass | Refer to Note 1 |
| 2.1051<br>27.53<br>(h) | Conducted Spurious Emissions | Pass | Refer to Note 1 |
| 2.1053<br>27.53<br>(h) | Radiated Spurious Emissions | Pass | Meet the requirement of limit.<br>Minimum passing margin is -30.01dB at 37.76MHz. |

Note:
1. This report is a partial report. Therefore, only test item of Equivalent Isotropically Radiated Power and Radiated Spurious Emissions tests were performed for this report. Other testing data please refer to BV CPS report no.: RFBFJZ-WTW-P21050403-10.
2. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

### 2.1 Measurement Uncertainty

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

| Measurement | Frequency | Expanded Uncertainty (k=2) (±) |
|---|---|---|
| Radiated Emissions up to 1 GHz | 9kHz ~ 30MHz | 3.04 dB |
| | 30MHz ~ 200MHz | 3.59 dB |
| | 200MHz ~1000MHz | 3.60 dB |
| Radiated Emissions above 1 GHz | 1GHz ~ 18GHz | 2.29 dB |
| | 18GHz ~ 40GHz | 2.29 dB |

## 2.2 Test Site and Instruments

| Description & Manufacturer | Model No. | Serial No. | Cal. Date | Cal. Due |
|---|---|---|---|---|
| Test Receiver<br>KEYSIGHT | N9038A | MY55420137 | Apr. 09, 2021 | Apr. 08, 2022 |
| Spectrum Analyzer<br>ROHDE & SCHWARZ | FSP40 | 100039 | Jun. 10, 2021 | Jun. 09, 2022 |
| Spectrum Analyzer<br>ROHDE & SCHWARZ | FSW43 | 101866 | Dec. 14, 2020 | Dec. 13, 2021 |
| MXG Vector signal generator<br>Agilent | N5182B | MY53050430 | Nov. 25, 2020 | Nov. 24, 2021 |
| Radio Communication Analyzer<br>Anritsu | MT8821C | 6261806803 | Jan. 22, 2021 | Jan. 21, 2022 |
| Universal Radio Communication Tester<br>R&S | CMU200 | 101095 | Nov. 18, 2020 | Nov. 17, 2021 |
| HORN Antenna<br>SCHWARZBECK | BBHA 9120D | 9120D-969 | Nov. 22, 2020 | Nov. 21, 2021 |
| BILOG Antenna<br>SCHWARZBECK | VULB9168 | 9168-160 | Nov. 06, 2020 | Nov. 05, 2021 |
| HORN Antenna<br>SCHWARZBECK | BBHA 9120 D | 9120D-1169 | Nov. 22, 2020 | Nov. 21, 2021 |
| HORN Antenna<br>SCHWARZBECK | BBHA 9170 | BBHA9170241 | Nov. 22, 2020 | Nov. 21, 2021 |
| Preamplifier<br>Agilent<br>(Below 1GHz) | 8447D | 2944A10638 | Jun. 05, 2021 | Jun. 04, 2022 |
| Preamplifier<br>Agilent<br>(Above 1GHz) | 8449B | 3008A02367 | Feb. 17, 2021 | Feb. 16, 2022 |
| RF signal cable<br>HUBER+SUHNER&EMCI | SUCOFLEX 104 & EMC104-SM-SM8000 | CABLE-CH9-02 (248780+171006) | Jan. 16, 2021 | Jan. 15, 2022 |
| RF signal cable<br>HUBER+SUHNER | SUCOFLEX 104 | CABLE-CH9-(250795/4) | Jan. 16, 2021 | Jan. 15, 2022 |
| RF signal cable<br>Woken | 8D-FB | Cable-CH9-01 | Jun. 05, 2021 | Jun. 04, 2022 |
| Software<br>BV ADT | ADT_Radiated_V7.6.15.9.5 | NA | NA | NA |
| Antenna Tower<br>EMCO | 2070/2080 | 512.835.4684 | NA | NA |
| Turn Table<br>EMCO | 2087-2.03 | NA | NA | NA |
| Antenna Tower &Turn<br>BV ADT | AT100 | AT93021705 | NA | NA |
| Turn Table<br>BV ADT | TT100 | TT93021705 | NA | NA |
| Turn Table Controller<br>BV ADT | SC100 | SC93021705 | NA | NA |
| Boresight Antenna Fixture | FBA-01 | FBA-SIP01 | NA | NA |
| Standard Temperature And Humidity Chamber<br>GIANT FORCE | GTH-120-40-CP-AR | MAA1306-019 | Sep. 10, 2020 | Sep. 09, 2021 |

| Description & Manufacturer | Model No. | Serial No. | Cal. Date | Cal. Due |
|---|---|---|---|---|
| JFW 20dB attenuation | 50HF-020-SMA | NA | NA | NA |
| True RMS Clamp Meter Fluke | 325 | 31130711WS | Jun. 02, 2021 | Jun. 01, 2022 |
| DC power supply Keysight | U8002A | MY56330015 | NA | NA |

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Chamber 9.

## 3 General Information

### 3.1 General Description of EUT

| | |
|---|---|
| Product | SmartPhone |
| Brand | Kyocera |
| Test Model | C6930 |
| Sample Status | Engineering sample |
| Power Supply Rating | 3.87Vdc from battery<br>5Vdc / 9Vdc / 12Vdc from adapter |

**n71**

| | | | | | | |
|---|---|---|---|---|---|---|
| Modulation Type | $\pi/2$ BPSK, QPSK, 16QAM, 64QAM, 256QAM | | | | | |
| Waveform Type | CP-OFDM, DFT-s-OFDM | | | | | |
| Operating Frequency | n71 (Channel Bandwidth 5MHz) | 665.5MHz ~ 695.5MHz | | | | |
| | n71 (Channel Bandwidth 10MHz) | 668.0MHz ~ 693.0MHz | | | | |
| | n71 (Channel Bandwidth 15MHz) | 670.5MHz ~ 690.5MHz | | | | |
| | n71 (Channel Bandwidth 20MHz) | 673.0MHz ~ 688.0MHz | | | | |
| Max. ERP Power | | $\pi/2$ BPSK | QPSK | 16QAM | 64QAM | 256QAM |
| | n71 (Channel Bandwidth 5MHz) | 49.431mW (16.94dBm) | 50.003mW (16.99dBm) | 38.815mW (15.89dBm) | 28.708mW (14.58dBm) | 18.323mW (12.63dBm) |
| | n71 (Channel Bandwidth 10MHz) | 49.091mW (16.91dBm) | 49.204mW (16.92dBm) | 38.548mW (15.86dBm) | 28.973mW (14.62dBm) | 18.493mW (12.67dBm) |
| | n71 (Channel Bandwidth 15MHz) | 49.545mW (16.95dBm) | 49.204mW (16.92dBm) | 38.994mW (15.91dBm) | 28.445mW (14.54dBm) | 18.707mW (12.72dBm) |
| | n71 (Channel Bandwidth 20MHz) | 49.888mW (16.98dBm) | 50.350mW (17.02dBm) | 39.084mW (15.92dBm) | 28.973mW (14.62dBm) | 18.750mW (12.73dBm) |
| Emission Designator | | $\pi/2$ BPSK | QPSK | 16QAM | 64QAM | 256QAM |
| | n71 (Channel Bandwidth 5MHz) | 4M47G7D | 4M47G7D | 4M47D7W | 4M47D7W | 4M47D7W |
| | n71 (Channel Bandwidth 10MHz) | 9M21G7D | 9M29G7D | 9M29D7W | 9M29D7W | 9M29D7W |
| | n71 (Channel Bandwidth 15MHz) | 14M1G7D | 14M1G7D | 14M1D7W | 14M1D7W | 14M1D7W |
| | n71 (Channel Bandwidth 20MHz) | 18M8G7D | 18M9G7D | 18M9D7W | 18M9D7W | 18M9D7W |

## LTE Band

| | | | | | | |
|---|---|---|---|---|---|---|
| Modulation Type | QPSK, 16QAM, 64QAM, 256QAM | | | | | |
| Operating Frequency | LTE Band 2 | Channel Bandwidth 1.4MHz | 1850.7MHz ~1909.3MHz | | | |
| | | Channel Bandwidth 3MHz | 1851.5MHz ~1908.5MHz | | | |
| | | Channel Bandwidth 5MHz | 1852.5MHz ~1907.5MHz | | | |
| | | Channel Bandwidth 10MHz | 1855.0MHz ~1905.0MHz | | | |
| | | Channel Bandwidth 15MHz | 1857.5MHz ~1902.5MHz | | | |
| | | Channel Bandwidth 20MHz | 1860.0MHz ~1900.0MHz | | | |
| | LTE Band 66 | Channel Bandwidth 1.4MHz | 1710.7MHz ~ 1779.3MHz | | | |
| | | Channel Bandwidth 3MHz | 1711.5MHz ~ 1778.5MHz | | | |
| | | Channel Bandwidth 5MHz | 1712.5MHz ~ 1777.5MHz | | | |
| | | Channel Bandwidth 10MHz | 1715.0MHz ~ 1775.0MHz | | | |
| | | Channel Bandwidth 15MHz | 1717.5MHz ~ 1772.5MHz | | | |
| | | Channel Bandwidth 20MHz | 1720.0MHz ~ 1770.0MHz | | | |
| Max. EIRP Power | LTE Band 2 | | QPSK | 16QAM | 64QAM | 256QAM |
| | | Channel Bandwidth 1.4MHz | 172.584mW (22.37dBm) | 144.212mW (21.59dBm) | 111.686mW (20.48dBm) | 58.884mW (17.70dBm) |
| | | Channel Bandwidth 3MHz | 174.582mW (22.42dBm) | 144.212mW (21.59dBm) | 110.408mW (20.43dBm) | 58.614mW (17.68dBm) |
| | | Channel Bandwidth 5MHz | 164.059mW (22.15dBm) | 140.929mW (21.49dBm) | 108.393mW (20.35dBm) | 59.020mW (17.71dBm) |
| | | Channel Bandwidth 10MHz | 169.044mW (22.28dBm) | 140.929mW (21.49dBm) | 115.878mW (20.64dBm) | 58.749mW (17.69dBm) |
| | | Channel Bandwidth 15MHz | 167.494mW (22.24dBm) | 147.231mW (21.68dBm) | 111.686mW (20.48dBm) | 59.293mW (17.73dBm) |
| | | Channel Bandwidth 20MHz | 172.187mW (22.36dBm) | 142.561mW (21.54dBm) | 116.145mW (20.65dBm) | 59.841mW (17.77dBm) |
| | LTE Band 66 | Channel Bandwidth 1.4MHz | 363.078mW (25.60dBm) | 304.789mW (24.84dBm) | 210.378mW (23.23dBm) | 123.027mW (20.90dBm) |
| | | Channel Bandwidth 3MHz | 361.410mW (25.58dBm) | 293.089mW (24.67dBm) | 213.796mW (23.30dBm) | 118.577mW (20.74dBm) |
| | | Channel Bandwidth 5MHz | 362.243mW (25.59dBm) | 322.849mW (25.09dBm) | 216.272mW (23.35dBm) | 115.080mW (20.61dBm) |
| | | Channel Bandwidth 10MHz | 358.096mW (25.54dBm) | 307.610mW (24.88dBm) | 205.116mW (23.12dBm) | 114.551mW (20.59dBm) |
| | | Channel Bandwidth 15MHz | 361.410mW (25.58dBm) | 293.765mW (24.68dBm) | 225.944mW (23.54dBm) | 127.057mW (21.04dBm) |
| | | Channel Bandwidth 20MHz | 369.828mW (25.68dBm) | 324.340mW (25.11dBm) | 225.944mW (23.54dBm) | 118.850mW (20.75dBm) |
| Antenna Type | Refer to Note as below | | | | | |
| Antenna Connector | Refer to Note as below | | | | | |
| Accessory Device | Refer to Note as below | | | | | |
| Cable Supplied | Refer to Note as below | | | | | |

Note:

1. The EUT contains following accessory devices.

| Battery | |
|---|---|
| Brand | KYOCERA |
| Model | SCP-75LBPS |
| Rating | 3.87 V typ / 4500 mAh/17.5 Wh typ |

| Adapter | |
|---|---|
| Brand | KYOCERA Corporation |
| Model | SCP-49ADT |
| Input Power | AC 100-240V, 50/60Hz 0.4A |
| Output Power | DC 5.0V, 1.8A / 9.0V, 1.8A / 12.0V, 1.2A |

| USB Cable | |
|---|---|
| Brand | KYOCERA Corporation |
| Model | SCP-24SDC |
| Signal Line | 1m shielded Type A to Type C USB cable |

2. The following antennas were provided to the EUT.

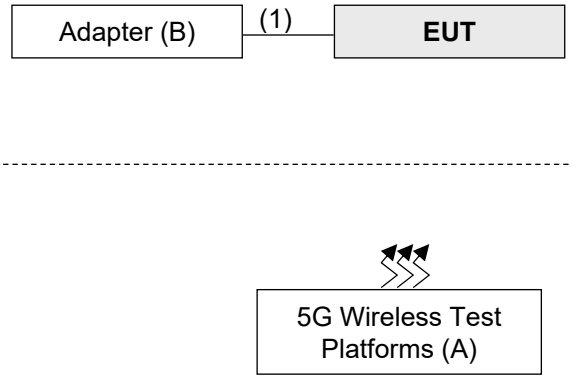
| Band | Freq. Range (MHz) | Gain (dBi) |
|---|---|---|
| n71 | 665.5 ~ 695.5 | -3.6 (Tx1) |
| LTE Band 2 | 1850.7 ~ 1909.3 | -0.8 (Tx1), -1.3 (Tx2) (diversity) |
| LTE Band 66 | 1710.7 ~ 1779.3 | 2.3 (Tx1), -0.5 (Tx2) (diversity) |

* The above Antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

3. The EUT supports the following ENDC configuration.

| | FCC 5G FR1 | | | ENDC |
|---|---|---|---|---|
| | Band | SCS | Bandwidth (MHz) | |
| 5GNR | n2 | 15kHz | 5/10/15/20 | Band 5/13 |
| | n5 | 15kHz | 5/10/15/20 | Band 2/48/66 |
| | n66 | 15kHz | 5/10/15/20 | Band 5/13 |
| | n71 | 15kHz | 5/10/15/20 | Band 2/66 |

## 3.2 Configuration of System under Test




### 3.2.1 Description of Support Units

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

| ID | Product | Brand | Model No. | Serial No. | FCC ID | Remarks |
|---|---|---|---|---|---|---|
| A. | 5G Wireless Test Platforms | Keysight | E7515B | MY58300759 | NA | - |
| B. | Adapter | KYOCERA | SCP-49ADT | NA | NA | Accessory |

Note:

1. All power cords of the above support units are non-shielded (1.8m).
2. Item A acted as a communication partner to transfer data.

| ID | Descriptions | Qty. | Length (m) | Shielding (Yes/No) | Cores (Qty.) | Remarks |
|---|---|---|---|---|---|---|
| 1. | Type A to Type C USB cable | 1 | 1 | Y | 0 | Accessory |

### 3.3 Test Mode Applicability and Tested Channel Detail

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

| Band | Radiated Emission |
|---|---|
| n71 | X-plane |
| LTE Band 2 | X-plane |
| LTE Band 66 | X-plane |

n71

| EUT Configure Mode | Test item | Available channel | Tested channel | Channel Bandwidth | Modulation | Mode |
|---|---|---|---|---|---|---|
| - | ERP | 133100 to 139100 | 133100 (665.5MHz), 136100 (680.5MHz), 139100 (695.5MHz) | 5 MHz | $\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM | 1 RB / 0 RB Offset<br>1 RB / 13 RB Offset<br>1 RB / 23 RB Offset<br>12 RB / 0 RB Offset<br>12 RB / 7 RB Offset<br>12 RB / 13 RB Offset<br>25 RB / 0 RB Offset |
| | | 133600 to 138600 | 133600 (668.0MHz), 136100 (680.5MHz), 138600 (693.0MHz) | 10 MHz | $\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM | 1 RB / 0 RB Offset<br>1 RB / 26 RB Offset<br>1 RB / 50 RB Offset<br>25 RB / 0 RB Offset<br>25 RB / 14 RB Offset<br>25 RB / 27 RB Offset<br>50 RB / 0 RB Offset |
| | | 134100 to 138100 | 134100 (670.5MHz), 136100 (680.5MHz), 138100 (690.5MHz) | 15 MHz | $\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM | 1 RB / 0 RB Offset<br>1 RB / 40 RB Offset<br>1 RB / 77 RB Offset<br>36 RB / 0 RB Offset<br>36 RB / 22 RB Offset<br>36 RB / 43 RB Offset<br>75 RB / 0 RB Offset |
| | | 134600 to 137600 | 134600 (673.0MHz), 136100 (680.5MHz), 137600 (688.0MHz) | 20 MHz | $\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM | 1 RB / 0 RB Offset<br>1 RB / 53 RB Offset<br>1 RB / 104 RB Offset<br>50 RB / 0 RB Offset<br>50 RB / 28 RB Offset<br>50 RB / 56 RB Offset<br>100 RB / 0 RB Offset |
| - | Modulation Characteristics | 134600 to 137600 | 136100 (680.5MHz) | 20 MHz | $\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM | 100 RB / 0 RB Offset |
| - | Frequency Stability | 133100 to 139100 | 133100 (665.5MHz), 139100 (695.5MHz) | 5 MHz | $\pi/2$ BPSK | 25 RB / 0 RB Offset |
| | | 133600 to 138600 | 133600 (668.0MHz), 138600 (693.0MHz) | 10 MHz | $\pi/2$ BPSK | 50 RB / 0 RB Offset |
| | | 134100 to 138100 | 134100 (670.5MHz), 138100 (690.5MHz) | 15 MHz | $\pi/2$ BPSK | 75 RB / 0 RB Offset |
| | | 134600 to 137600 | 134600 (673.0MHz), 137600 (688.0MHz) | 20 MHz | $\pi/2$ BPSK | 100 RB / 0 RB Offset |

| EUT Configure Mode | Test item | Available channel | Tested channel | Channel Bandwidth | Modulation | Mode |
|---|---|---|---|---|---|---|
| - | Emission Bandwidth | 133100 to 139100 | 133100 (665.5MHz), 136100 (680.5MHz), 139100 (695.5MHz) | 5 MHz | $\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM | 25 RB / 0 RB Offset |
| | | 133600 to 138600 | 133600 (668.0MHz), 136100 (680.5MHz), 138600 (693.0MHz) | 10 MHz | $\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM | 50 RB / 0 RB Offset |
| | | 134100 to 138100 | 134100 (670.5MHz), 136100 (680.5MHz), 138100 (690.5MHz) | 15 MHz | $\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM | 75 RB / 0 RB Offset |
| | | 134600 to 137600 | 134600 (673.0MHz), 136100 (680.5MHz), 137600 (688.0MHz) | 20 MHz | $\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM | 100 RB / 0 RB Offset |
| - | Band Edge | 133100 to 139100 | 133100 (665.5MHz), 139100 (695.5MHz) | 5 MHz | $\pi/2$ BPSK | 1 RB / 0 RB Offset<br>1 RB / 23 RB Offset<br>25 RB / 0 RB Offset |
| | | 133600 to 138600 | 133600 (668.0MHz), 138600 (693.0MHz) | 10 MHz | $\pi/2$ BPSK | 1 RB / 0 RB Offset<br>1 RB / 50 RB Offset<br>50 RB / 0 RB Offset |
| | | 134100 to 138100 | 134100 (670.5MHz), 138100 (690.5MHz) | 15 MHz | $\pi/2$ BPSK | 1 RB / 0 RB Offset<br>1 RB / 77 RB Offset<br>75 RB / 0 RB Offset |
| | | 134600 to 137600 | 134600 (673.0MHz), 137600 (688.0MHz) | 20 MHz | $\pi/2$ BPSK | 1 RB / 0 RB Offset<br>1 RB / 104 RB Offset<br>100 RB / 0 RB Offset |
| - | Peak to Average Ratio | 133100 to 139100 | 133100 (665.5MHz), 136100 (680.5MHz), 139100 (695.5MHz) | 5 MHz | $\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM | 1 RB / 0 RB Offset |
| | | 133600 to 138600 | 133600 (668.0MHz), 136100 (680.5MHz), 138600 (693.0MHz) | 10 MHz | $\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM | 1 RB / 0 RB Offset |
| | | 134100 to 138100 | 134100 (670.5MHz), 136100 (680.5MHz), 138100 (690.5MHz) | 15 MHz | $\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM | 1 RB / 0 RB Offset |
| | | 134600 to 137600 | 134600 (673.0MHz), 136100 (680.5MHz), 137600 (688.0MHz) | 20 MHz | $\pi/2$ BPSK / QPSK / 16QAM / 64QAM / 256QAM | 1 RB / 0 RB Offset |
| - | Conducted Emission | 133100 to 139100 | 133100 (665.5MHz), 136100 (680.5MHz), 139100 (695.5MHz) | 5 MHz | $\pi/2$ BPSK | 1 RB / 0 RB Offset |
| | | 133600 to 138600 | 133600 (668.0MHz), 136100 (680.5MHz), 138600 (693.0MHz) | 10 MHz | $\pi/2$ BPSK | 1 RB / 0 RB Offset |
| | | 134100 to 138100 | 134100 (670.5MHz), 136100 (680.5MHz), 138100 (690.5MHz) | 15 MHz | $\pi/2$ BPSK | 1 RB / 0 RB Offset |
| | | 134600 to 137600 | 134600 (673.0MHz), 136100 (680.5MHz), 137600 (688.0MHz) | 20 MHz | $\pi/2$ BPSK | 1 RB / 0 RB Offset |

| EUT Configure Mode | Test item | Available channel | Tested channel | Channel Bandwidth | Modulation | Mode |
|---|---|---|---|---|---|---|
| - | Radiated Emission Below 1GHz | 133100 to 139100 | 136100 (680.5MHz) | 5 MHz | $\pi/2$ BPSK | 1 RB / 0 RB Offset |
| - | Radiated Emission Above 1GHz | 133100 to 139100 | 133100 (665.5MHz), 136100 (680.5MHz), 139100 (695.5MHz) | 5 MHz | $\pi/2$ BPSK | 1 RB / 0 RB Offset |
| | | 134600 to 137600 | 134600 (673.0MHz), 136100 (680.5MHz), 137600 (688.0MHz) | 20 MHz | $\pi/2$ BPSK | 1 RB / 0 RB Offset |

Note: Only output power, modulation characteristics, occupied bandwidth and Peak to average ratio items had been tested under $\pi/2$ BPSK, QPSK, 16QAM, 64QAM and 256QAM modes, the other test items were performed under worst mode according to the maximum output power.

LTE Band 2

| EUT Configure Mode | Test item | Available channel | Tested Channel | Channel Bandwidth | Modulation | Mode |
|---|---|---|---|---|---|---|
| - | EIRP | 18607 to 19193 | 18607 (1850.70MHz),<br>18900 (1880.00MHz),<br>19193 (1909.30MHz) | 1.4MHz | QPSK / 16QAM /<br>64QAM /<br>256QAM | 1 RB / 0 RB Offset<br>1 RB / 2 RB Offset<br>1 RB / 5 RB Offset<br>3 RB / 0 RB Offset<br>3 RB / 1 RB Offset<br>3 RB / 3 RB Offset<br>6 RB / 0 RB Offset |
| | | 18615 to 19185 | 18615 (1851.50MHz),<br>18900 (1880.00MHz),<br>19185 (1908.50MHz) | 3MHz | QPSK / 16QAM /<br>64QAM /<br>256QAM | 1 RB / 0 RB Offset<br>1 RB / 7 RB Offset<br>1 RB / 14 RB Offset<br>8 RB / 0 RB Offset<br>8 RB / 3 RB Offset<br>8 RB / 7 RB Offset<br>15 RB / 0 RB Offset |
| | | 18625 to 19175 | 18625 (1852.50MHz),<br>18900 (1880.00MHz),<br>19175 (1907.50MHz) | 5MHz | QPSK / 16QAM /<br>64QAM /<br>256QAM | 1 RB / 0 RB Offset<br>1 RB / 12 RB Offset<br>1 RB / 24 RB Offset<br>12 RB / 0 RB Offset<br>12 RB / 6 RB Offset<br>12 RB / 13 RB Offset<br>25 RB / 0 RB Offset |
| | | 18650 to 19150 | 18650 (1855.00MHz),<br>18900 (1880.00MHz),<br>19150 (1905.00MHz) | 10MHz | QPSK / 16QAM /<br>64QAM /<br>256QAM | 1 RB / 0 RB Offset<br>1 RB / 24 RB Offset<br>1 RB / 49 RB Offset<br>25 RB / 0 RB Offset<br>25 RB / 12 RB Offset<br>25 RB / 25 RB Offset<br>50 RB / 0 RB Offset |
| | | 18675 to 19125 | 18675 (1857.50MHz),<br>18900 (1880.00MHz),<br>19125 (1902.50MHz) | 15MHz | QPSK / 16QAM /<br>64QAM /<br>256QAM | 1 RB / 0 RB Offset<br>1 RB / 37 RB Offset<br>1 RB / 74 RB Offset<br>36 RB / 0 RB Offset<br>36 RB / 19 RB Offset<br>36 RB / 39 RB Offset<br>75 RB / 0 RB Offset |
| | | 18700 to 19100 | 18700 (1860.00MHz),<br>18900 (1880.00MHz),<br>19100 (1900.00MHz) | 20MHz | QPSK / 16QAM /<br>64QAM /<br>256QAM | 1 RB / 0 RB Offset<br>1 RB / 50 RB Offset<br>1 RB / 99 RB Offset<br>50 RB / 0 RB Offset<br>50 RB / 25 RB Offset<br>50 RB / 50 RB Offset<br>100 RB / 0 RB Offset |
| - | Radiated Emission Below 1GHz | 18607 to 19193 | 18900 (1880.00MHz) | 1.4MHz | QPSK | 1 RB / 0 RB Offset |
| - | Radiated Emission Above 1GHz | 18607 to 19193 | 18607 (1850.70MHz),<br>18900 (1880.00MHz),<br>19193 (1909.30MHz) | 1.4MHz | QPSK | 1 RB / 0 RB Offset |
| | | 18625 to 19175 | 18625 (1852.50MHz),<br>18900 (1880.00MHz),<br>19175 (1907.50MHz) | 5MHz | QPSK | 1 RB / 0 RB Offset |
| | | 18700 to 19100 | 18700 (1860.00MHz),<br>18900 (1880.00MHz),<br>19100 (1900.00MHz) | 20MHz | QPSK | 1 RB / 0 RB Offset |

Note:

1. The measured output power for QPSK mode is higher than the measured output power for 16QAM, 64QAM and 256QAM modes. Therefore, only EIRP, occupied bandwidth and Peak to average ratio items had been tested under QPSK, 16QAM, 64QAM and 256QAM modes, the other test items were performed under QPSK mode only.
2. For radiated emission above 1GHz, according to 3GPP 36.521 Section 6.6.3.1.4, choose the lowest, 5MHz & highest channel bandwidth for final test.

LTE Band 66

| EUT Configure Mode | Test Item | Available Channel | Tested Channel | Channel Bandwidth | Modulation | Mode |
|---|---|---|---|---|---|---|
| - | EIRP | 131979 to 132665 | 131979 (1710.7MHz),<br>132322 (1745.0MHz),<br>132665 (1779.3MHz) | 1.4MHz | QPSK /<br>16QAM /<br>64QAM /<br>256QAM | 1 RB / 0 RB Offset<br>1 RB / 2 RB Offset<br>1 RB / 5 RB Offset<br>3 RB / 0 RB Offset<br>3 RB / 1 RB Offset<br>3 RB / 3 RB Offset<br>6 RB / 0 RB Offset |
| | | 131987 to 132657 | 131987 (1711.5MHz),<br>132322 (1745.0MHz),<br>132657 (1778.5MHz) | 3MHz | QPSK /<br>16QAM /<br>64QAM /<br>256QAM | 1 RB / 0 RB Offset<br>1 RB / 7 RB Offset<br>1 RB / 14 RB Offset<br>8 RB / 0 RB Offset<br>8 RB / 3 RB Offset<br>8 RB / 7 RB Offset<br>15 RB / 0 RB Offset |
| | | 131997 to 132647 | 131997 (1712.5MHz),<br>132322 (1745.0MHz),<br>132647 (1777.5MHz) | 5MHz | QPSK /<br>16QAM /<br>64QAM /<br>256QAM | 1 RB / 0 RB Offset<br>1 RB / 12 RB Offset<br>1 RB / 24 RB Offset<br>12 RB / 0 RB Offset<br>12 RB / 6 RB Offset<br>12 RB / 13 RB Offset<br>25 RB / 0 RB Offset |
| | | 132022 to 132622 | 132022 (1715.0MHz),<br>132322 (1745.0MHz),<br>132622 (1775.0MHz) | 10MHz | QPSK /<br>16QAM /<br>64QAM /<br>256QAM | 1 RB / 0 RB Offset<br>1 RB / 24 RB Offset<br>1 RB / 49 RB Offset<br>25 RB / 0 RB Offset<br>25 RB / 12 RB Offset<br>25 RB / 25 RB Offset<br>50 RB / 0 RB Offset |
| | | 132047 to 132597 | 132047 (1717.5MHz),<br>132322 (1745.0MHz),<br>132597 (1772.5MHz) | 15MHz | QPSK /<br>16QAM /<br>64QAM /<br>256QAM | 1 RB / 0 RB Offset<br>1 RB / 37 RB Offset<br>1 RB / 74 RB Offset<br>36 RB / 0 RB Offset<br>36 RB / 19 RB Offset<br>36 RB / 39 RB Offset<br>75 RB / 0 RB Offset |
| | | 132072 to 132572 | 132072 (1720.0MHz),<br>132322 (1745.0MHz),<br>132572 (1770.0MHz) | 20MHz | QPSK /<br>16QAM /<br>64QAM /<br>256QAM | 1 RB / 0 RB Offset<br>1 RB / 50 RB Offset<br>1 RB / 99 RB Offset<br>50 RB / 0 RB Offset<br>50 RB / 25 RB Offset<br>50 RB / 50 RB Offset<br>100 RB / 0 RB Offset |
| - | Radiated Emission Below 1GHz | 131979 to 132665 | 132665 (1779.3MHz) | 1.4MHz | QPSK | 1 RB / 0 RB Offset |
| - | Radiated Emission Above 1GHz | 131979 to 132665 | 131979 (1710.7MHz),<br>132322 (1745.0MHz),<br>132665 (1779.3MHz) | 1.4MHz | QPSK | 1 RB / 0 RB Offset |
| | | 131997 to 132647 | 131997 (1712.5MHz),<br>132322 (1745.0MHz),<br>132647 (1777.5MHz) | 5MHz | QPSK | 1 RB / 0 RB Offset |
| | | 132072 to 132572 | 132072 (1720.0MHz),<br>132322 (1745.0MHz),<br>132572 (1770.0MHz) | 20MHz | QPSK | 1 RB / 0 RB Offset |

Note:

1. The measured output power for QPSK mode is higher than the measured output power for 16QAM, 64QAM and 256QAM modes. Therefore, only EIRP, occupied bandwidth and Peak to average ratio items had been tested under QPSK, 16QAM, 64QAM and 256QAM modes, the other test items were performed under QPSK mode only.
2. For radiated emission above 1GHz, according to 3GPP 36.521 Section 6.6.3.1.4, choose the lowest, 5MHz & highest channel bandwidth for final test.

Test Condition:

| Test Item | Environmental Conditions | Input Power (system) | Tested By |
|---|---|---|---|
| ERP / EIRP | 25deg. C, 60%RH | 120Vac, 60Hz | James Yang |
| Modulation characteristics | 25deg. C, 60%RH | 120Vac, 60Hz | James Yang |
| Frequency Stability | 25deg. C, 60%RH | 3.87Vdc | James Yang |
| Occupied Bandwidth | 25deg. C, 60%RH | 120Vac, 60Hz | James Yang |
| Band Edge | 25deg. C, 60%RH | 120Vac, 60Hz | James Yang |
| Peak To Average Ratio | 25deg. C, 60%RH | 120Vac, 60Hz | James Yang |
| Conducted Emission | 25deg. C, 60%RH | 120Vac, 60Hz | James Yang |
| Radiated Emission | 22deg. C, 66%RH | 120Vac, 60Hz | Greg Lin |

### 3.4 EUT Operating Conditions

The EUT makes a call to the communication simulator. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency

### 3.5 General Description of Applied Standards and References

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

**Test Standard:**

**FCC 47 CFR Part 2**

**FCC 47 CFR Part 24**

**FCC 47 CFR Part 27**

**ANSI/TIA/EIA-603-D-2010**

**ANSI/TIA/EIA-603-E 2016**

**ANSI 63.26-2015**

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

**References Test Guidance:**

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

**KDB 971168 D02 Misc Rev Approv License Devices v02r01**

All test items have been performed as a reference to the above KDB test guidance.

# 4 Test Types and Results

## 4.1 Output Power Measurement

### 4.1.1 Limits of Output Power Measurement

For n71:
Control and mobile stations in the 698-746 MHz, 746-757 MHz, 787-788 MHz and 805-806 MHz band are limited to 30 watts ERP.
Portable stations (hand-held devices) in the 600 MHz uplink band and the 698-746 MHz band, and fixed and mobile stations in the 600 MHz uplink, 746-757 MHz,787-788 MHz and 805-806 MHzband are limited to 3 watts ERP.

For LTE Band 2:
Mobile / Portable station are limited to 2 watts e.i.r.p.

For LTE Band 66:
Mobile / Portable station are limited to 1 watts e.i.r.p.

### 4.1.2 Test Procedures

**Conducted Power Measurement:**

The EUT was set up for the maximum power with 5GNR link data modulation and link up with simulator. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.

**Maximum EIRP**

The relevant equation for determining the maximum ERP or EIRP from the measured RF output power is given in Equation as follows:
ERP or EIRP = $P_{Meas}$ + $G_T$
where
ERP or EIRP effective radiated power or equivalent isotropically radiated power, respectively (expressed in the same units as $P_{Meas}$, e.g., dBm or dBW)
$P_{Meas}$ measured transmitter output power or PSD, in dBm or dBW
$G_T$ gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP)

### 4.1.3 Test Setup

Conducted Power Measurement:

### 4.1.4 Test Results

**Conducted Output Power (dBm)**

| NR Band 71 | | | | | | |
|---|---|---|---|---|---|---|
| BW | MCS Index | RB Size | RB Offset | Low | Mid | High |
| | | Channel | | 134600 | 136100 | 137600 |
| | | Frequency (MHz) | | 673 | 680.5 | 688 |
| 20M | $\pi/2$ BPSK | 1 | 1 | 22.73 | 22.43 | 22.34 |
| 20M | QPSK | 1 | 1 | 22.77 | 22.47 | 22.38 |
| | | 1 | 53 | 22.43 | 22.31 | 22.25 |
| | | 1 | 104 | 22.38 | 22.29 | 22.23 |
| | | 50 | 0 | 21.57 | 21.39 | 21.25 |
| | | 50 | 28 | 22.58 | 22.33 | 22.29 |
| | | 50 | 56 | 21.45 | 21.32 | 21.28 |
| | | 100 | 0 | 21.56 | 21.41 | 21.29 |
| 20M | 16QAM | 1 | 1 | 21.67 | 21.37 | 21.28 |
| 20M | 64QAM | 1 | 1 | 20.37 | 20.07 | 19.98 |
| 20M | 256QAM | 1 | 1 | 18.48 | 18.18 | 18.09 |
| BW | MCS Index | Channel | | 134100 | 136100 | 138100 |
| | | Frequency (MHz) | | 670.5 | 680.5 | 690.5 |
| 15M | $\pi/2$ BPSK | 1 | 1 | 22.70 | 22.36 | 22.33 |
| 15M | QPSK | 1 | 1 | 22.67 | 22.47 | 22.38 |
| | | 1 | 40 | 22.37 | 22.30 | 22.21 |
| | | 1 | 77 | 22.36 | 22.22 | 22.16 |
| | | 36 | 0 | 21.54 | 21.31 | 21.23 |
| | | 36 | 22 | 22.56 | 22.32 | 22.19 |
| | | 36 | 43 | 21.36 | 21.26 | 21.22 |
| | | 75 | 0 | 21.46 | 21.39 | 21.29 |
| 15M | 16QAM | 1 | 1 | 21.66 | 21.33 | 21.23 |
| 15M | 64QAM | 1 | 1 | 20.29 | 19.99 | 19.95 |
| 15M | 256QAM | 1 | 1 | 18.47 | 18.08 | 18.04 |

| NR Band 71 | | | | | | |
|---|---|---|---|---|---|---|
| BW | MCS Index | RB Size | RB Offset | Low | Mid | High |
| | | Channel | | 133600 | 136100 | 138600 |
| | | Frequency (MHz) | | 668 | 680.5 | 693 |
| 10M | $\pi/2$ BPSK | 1 | 1 | 22.66 | 22.33 | 22.28 |
| 10M | QPSK | 1 | 1 | 22.67 | 22.37 | 22.28 |
| | | 1 | 26 | 22.42 | 22.24 | 22.19 |
| | | 1 | 50 | 22.38 | 22.29 | 22.21 |
| | | 25 | 0 | 21.53 | 21.35 | 21.19 |
| | | 25 | 14 | 22.48 | 22.30 | 22.26 |
| | | 25 | 27 | 21.35 | 21.32 | 21.24 |
| | | 50 | 0 | 21.51 | 21.40 | 21.25 |
| 10M | 16QAM | 1 | 1 | 21.61 | 21.29 | 21.22 |
| 10M | 64QAM | 1 | 1 | 20.37 | 20.00 | 19.90 |
| 10M | 256QAM | 1 | 1 | 18.42 | 18.12 | 18.08 |
| BW | MCS Index | Channel | | 133100 | 136100 | 139100 |
| | | Frequency (MHz) | | 665.5 | 680.5 | 695.5 |
| 5M | $\pi/2$ BPSK | 1 | 1 | 22.69 | 22.42 | 22.29 |
| 5M | QPSK | 1 | 1 | 22.74 | 22.43 | 22.35 |
| | | 1 | 13 | 22.40 | 22.26 | 22.23 |
| | | 1 | 23 | 22.32 | 22.25 | 22.23 |
| | | 12 | 0 | 21.52 | 21.34 | 21.20 |
| | | 12 | 7 | 22.53 | 22.32 | 22.26 |
| | | 12 | 13 | 21.45 | 21.24 | 21.28 |
| | | 25 | 0 | 21.52 | 21.38 | 21.24 |
| 5M | 16QAM | 1 | 1 | 21.64 | 21.35 | 21.26 |
| 5M | 64QAM | 1 | 1 | 20.33 | 20.00 | 19.96 |
| 5M | 256QAM | 1 | 1 | 18.38 | 18.08 | 18.09 |

| LTE Band 2 | | | | | | |
|---|---|---|---|---|---|---|
| BW | MCS Index | RB Size | RB Offset | Low | Mid | High |
| | | Channel | | 18700 | 18900 | 19100 |
| | | Frequency (MHz) | | 1860 | 1880 | 1900 |
| 20M | QPSK | 1 | 0 | 23.15 | 23.16 | 23.14 |
| | | 1 | 50 | 23.03 | 22.85 | 23.07 |
| | | 1 | 99 | 22.71 | 22.72 | 22.85 |
| | | 50 | 0 | 22.49 | 22.05 | 22.32 |
| | | 50 | 25 | 22.25 | 21.98 | 22.31 |
| | | 50 | 50 | 21.89 | 22.30 | 21.93 |
| | | 100 | 0 | 22.03 | 22.19 | 22.01 |
| 20M | 16QAM | 1 | 0 | 22.31 | 22.25 | 21.94 |
| | | 1 | 50 | 22.12 | 22.34 | 21.93 |
| | | 1 | 99 | 22.34 | 22.17 | 21.93 |
| | | 50 | 0 | 20.94 | 21.30 | 21.02 |
| | | 50 | 25 | 21.40 | 21.52 | 20.90 |
| | | 50 | 50 | 21.06 | 20.93 | 21.10 |
| | | 100 | 0 | 20.81 | 20.94 | 20.93 |
| 20M | 64QAM | 1 | 0 | 21.43 | 21.21 | 21.16 |
| | | 1 | 50 | 21.38 | 21.41 | 21.29 |
| | | 1 | 99 | 21.41 | 21.45 | 21.35 |
| | | 50 | 0 | 20.17 | 19.99 | 20.34 |
| | | 50 | 25 | 20.23 | 20.46 | 19.98 |
| | | 50 | 50 | 20.23 | 20.02 | 20.03 |
| | | 100 | 0 | 20.18 | 20.48 | 20.20 |
| 20M | 256QAM | 1 | 0 | 18.04 | 18.14 | 18.40 |
| | | 1 | 50 | 18.16 | 18.57 | 17.96 |
| | | 1 | 99 | 18.27 | 18.16 | 17.89 |
| | | 50 | 0 | 18.29 | 18.56 | 17.97 |
| | | 50 | 25 | 18.41 | 18.37 | 18.03 |
| | | 50 | 50 | 18.13 | 17.97 | 17.82 |
| | | 100 | 0 | 17.92 | 18.20 | 18.24 |

| LTE Band 2 | | | | | | |
|---|---|---|---|---|---|---|
| BW | MCS Index | RB Size | RB Offset | Low | Mid | High |
| | | Channel | | 18675 | 18900 | 19125 |
| | | Frequency (MHz) | | 1857.5 | 1880 | 1902.5 |
| 15M | QPSK | 1 | 0 | 22.82 | 23.04 | 23.00 |
| | | 1 | 37 | 22.99 | 22.96 | 22.97 |
| | | 1 | 74 | 22.94 | 23.00 | 22.96 |
| | | 36 | 0 | 22.22 | 21.99 | 21.82 |
| | | 36 | 19 | 22.25 | 21.96 | 21.85 |
| | | 36 | 39 | 22.20 | 21.86 | 22.15 |
| | | 75 | 0 | 22.04 | 22.07 | 22.01 |
| 15M | 16QAM | 1 | 0 | 22.28 | 22.15 | 22.07 |
| | | 1 | 37 | 22.12 | 22.48 | 22.28 |
| | | 1 | 74 | 22.26 | 22.27 | 22.32 |
| | | 36 | 0 | 21.04 | 21.46 | 21.09 |
| | | 36 | 19 | 21.27 | 21.48 | 21.37 |
| | | 36 | 39 | 21.22 | 20.98 | 20.85 |
| | | 75 | 0 | 21.03 | 21.12 | 21.19 |
| 15M | 64QAM | 1 | 0 | 21.08 | 21.23 | 20.96 |
| | | 1 | 37 | 21.22 | 21.28 | 21.06 |
| | | 1 | 74 | 21.06 | 21.19 | 20.89 |
| | | 36 | 0 | 19.86 | 20.17 | 20.13 |
| | | 36 | 19 | 20.20 | 20.11 | 20.11 |
| | | 36 | 39 | 19.73 | 20.32 | 20.19 |
| | | 75 | 0 | 20.21 | 20.39 | 20.29 |
| 15M | 256QAM | 1 | 0 | 18.44 | 18.40 | 17.98 |
| | | 1 | 37 | 18.04 | 18.53 | 17.90 |
| | | 1 | 74 | 18.01 | 18.24 | 17.83 |
| | | 36 | 0 | 18.11 | 18.53 | 17.85 |
| | | 36 | 19 | 18.21 | 18.42 | 17.91 |
| | | 36 | 39 | 18.01 | 18.04 | 17.81 |
| | | 75 | 0 | 18.25 | 17.93 | 18.17 |

| LTE Band 2 | | | | | | |
|---|---|---|---|---|---|---|
| BW | MCS Index | RB Size | RB Offset | Low | Mid | High |
| | | Channel | | 18650 | 18900 | 19150 |
| | | Frequency (MHz) | | 1855 | 1880 | 1905 |
| 10M | QPSK | 1 | 0 | 23.08 | 22.95 | 23.06 |
| | | 1 | 24 | 22.85 | 22.84 | 22.82 |
| | | 1 | 49 | 23.01 | 22.78 | 22.73 |
| | | 25 | 0 | 22.24 | 22.49 | 21.97 |
| | | 25 | 12 | 22.14 | 22.22 | 22.10 |
| | | 25 | 25 | 21.73 | 21.79 | 21.80 |
| | | 50 | 0 | 22.06 | 21.98 | 21.74 |
| 10M | 16QAM | 1 | 0 | 21.96 | 22.29 | 22.26 |
| | | 1 | 24 | 22.06 | 22.02 | 21.92 |
| | | 1 | 49 | 22.12 | 22.13 | 21.76 |
| | | 25 | 0 | 20.82 | 21.29 | 21.33 |
| | | 25 | 12 | 20.87 | 20.97 | 21.18 |
| | | 25 | 25 | 21.22 | 21.25 | 20.77 |
| | | 50 | 0 | 21.01 | 20.73 | 21.05 |
| 10M | 64QAM | 1 | 0 | 21.44 | 21.34 | 20.82 |
| | | 1 | 24 | 21.43 | 20.93 | 21.30 |
| | | 1 | 49 | 21.07 | 21.15 | 21.22 |
| | | 25 | 0 | 19.98 | 20.28 | 20.20 |
| | | 25 | 12 | 20.04 | 20.27 | 19.97 |
| | | 25 | 25 | 20.00 | 20.09 | 19.85 |
| | | 50 | 0 | 19.95 | 20.22 | 20.16 |
| 10M | 256QAM | 1 | 0 | 18.49 | 17.89 | 18.34 |
| | | 1 | 24 | 18.43 | 18.10 | 18.33 |
| | | 1 | 49 | 18.31 | 18.04 | 18.12 |
| | | 25 | 0 | 18.46 | 18.31 | 17.83 |
| | | 25 | 12 | 18.28 | 18.03 | 18.18 |
| | | 25 | 25 | 18.01 | 18.12 | 17.91 |
| | | 50 | 0 | 18.19 | 18.09 | 18.19 |

| LTE Band 2 | | | | | | |
|---|---|---|---|---|---|---|
| BW | MCS Index | RB Size | RB Offset | Low | Mid | High |
| | | Channel | | 18625 | 18900 | 19175 |
| | | Frequency (MHz) | | 1852.5 | 1880 | 1907.5 |
| 5M | QPSK | 1 | 0 | 22.72 | 22.95 | 22.83 |
| | | 1 | 12 | 22.76 | 22.93 | 22.73 |
| | | 1 | 24 | 22.73 | 22.94 | 22.79 |
| | | 12 | 0 | 22.33 | 22.21 | 22.28 |
| | | 12 | 6 | 21.81 | 21.87 | 22.08 |
| | | 12 | 13 | 21.89 | 21.94 | 21.89 |
| | | 25 | 0 | 21.86 | 21.74 | 21.76 |
| 5M | 16QAM | 1 | 0 | 21.79 | 22.29 | 22.06 |
| | | 1 | 12 | 22.23 | 22.14 | 22.00 |
| | | 1 | 24 | 22.17 | 22.09 | 21.75 |
| | | 12 | 0 | 20.98 | 21.39 | 20.90 |
| | | 12 | 6 | 21.27 | 20.81 | 21.00 |
| | | 12 | 13 | 21.08 | 21.10 | 20.98 |
| | | 25 | 0 | 20.97 | 21.04 | 20.90 |
| 5M | 64QAM | 1 | 0 | 20.93 | 21.01 | 21.13 |
| | | 1 | 12 | 21.07 | 21.15 | 20.82 |
| | | 1 | 24 | 20.89 | 20.98 | 20.90 |
| | | 12 | 0 | 19.90 | 20.24 | 19.89 |
| | | 12 | 6 | 19.73 | 20.10 | 20.18 |
| | | 12 | 13 | 20.11 | 19.77 | 19.98 |
| | | 25 | 0 | 20.17 | 20.06 | 20.15 |
| 5M | 256QAM | 1 | 0 | 18.51 | 18.15 | 18.16 |
| | | 1 | 12 | 18.21 | 17.96 | 18.11 |
| | | 1 | 24 | 17.96 | 18.04 | 17.99 |
| | | 12 | 0 | 18.25 | 18.28 | 17.86 |
| | | 12 | 6 | 18.30 | 18.15 | 18.06 |
| | | 12 | 13 | 18.03 | 18.25 | 17.84 |
| | | 25 | 0 | 18.25 | 17.81 | 17.73 |

| LTE Band 2 | | | | | | |
|---|---|---|---|---|---|---|
| BW | MCS Index | RB Size | RB Offset | Low | Mid | High |
| | | Channel | | 18615 | 18900 | 19185 |
| | | Frequency (MHz) | | 1851.5 | 1880 | 1908.5 |
| 3M | QPSK | 1 | 0 | **23.22** | 23.15 | 22.98 |
| | | 1 | 7 | 22.75 | 22.80 | 22.87 |
| | | 1 | 14 | 22.79 | 22.85 | 22.72 |
| | | 8 | 0 | 22.16 | 21.99 | 21.76 |
| | | 8 | 3 | 22.06 | 22.08 | 21.98 |
| | | 8 | 7 | 21.81 | 22.19 | 21.88 |
| | | 15 | 0 | 21.82 | 22.22 | 22.17 |
| 3M | 16QAM | 1 | 0 | 22.39 | 22.39 | 22.31 |
| | | 1 | 7 | 21.91 | 22.10 | 22.10 |
| | | 1 | 14 | 22.13 | 22.13 | 22.11 |
| | | 8 | 0 | 20.89 | 20.92 | 21.08 |
| | | 8 | 3 | 20.81 | 21.16 | 21.08 |
| | | 8 | 7 | 21.09 | 21.15 | 20.96 |
| | | 15 | 0 | 20.87 | 21.15 | 20.96 |
| 3M | 64QAM | 1 | 0 | 20.96 | 21.23 | 21.09 |
| | | 1 | 7 | 21.22 | 21.10 | 21.08 |
| | | 1 | 14 | 21.03 | 20.87 | 20.75 |
| | | 8 | 0 | 19.92 | 20.13 | 19.71 |
| | | 8 | 3 | 20.01 | 19.88 | 20.17 |
| | | 8 | 7 | 19.83 | 20.11 | 20.06 |
| | | 15 | 0 | 19.98 | 20.05 | 19.86 |
| 3M | 256QAM | 1 | 0 | 18.40 | 18.44 | 18.16 |
| | | 1 | 7 | 18.05 | 18.15 | 18.18 |
| | | 1 | 14 | 17.90 | 18.44 | 18.39 |
| | | 8 | 0 | 18.12 | 18.38 | 18.48 |
| | | 8 | 3 | 17.97 | 17.87 | 17.94 |
| | | 8 | 7 | 18.00 | 18.22 | 17.92 |
| | | 15 | 0 | 17.95 | 18.13 | 18.03 |

| LTE Band 2 | | | | | | |
|---|---|---|---|---|---|---|
| BW | MCS Index | RB Size | RB Offset | Low | Mid | High |
| | | Channel | | 18607 | 18900 | 19193 |
| | | Frequency (MHz) | | 1850.7 | 1880 | 1909.3 |
| 1.4M | QPSK | 1 | 0 | 23.10 | 23.05 | 23.03 |
| | | 1 | 2 | 22.89 | 22.88 | 22.96 |
| | | 1 | 5 | 22.74 | 23.04 | 22.94 |
| | | 3 | 0 | 22.86 | 22.88 | 22.92 |
| | | 3 | 1 | 22.89 | 23.17 | 22.99 |
| | | 3 | 3 | 22.82 | 22.88 | 22.70 |
| | | 6 | 0 | 21.98 | 22.17 | 21.79 |
| 1.4M | 16QAM | 1 | 0 | 22.39 | 22.34 | 21.79 |
| | | 1 | 2 | 21.86 | 22.13 | 22.32 |
| | | 1 | 5 | 22.13 | 22.13 | 22.04 |
| | | 3 | 0 | 21.88 | 22.18 | 22.16 |
| | | 3 | 1 | 22.15 | 21.84 | 22.06 |
| | | 3 | 3 | 22.07 | 22.35 | 22.19 |
| | | 6 | 0 | 21.03 | 21.02 | 20.85 |
| 1.4M | 64QAM | 1 | 0 | 21.25 | 21.24 | 20.77 |
| | | 1 | 2 | 21.23 | 21.17 | 21.00 |
| | | 1 | 5 | 20.89 | 21.20 | 21.03 |
| | | 3 | 0 | 21.25 | 21.28 | 20.74 |
| | | 3 | 1 | 20.92 | 21.05 | 20.85 |
| | | 3 | 3 | 21.11 | 21.06 | 20.88 |
| | | 6 | 0 | 19.84 | 19.96 | 20.08 |
| 1.4M | 256QAM | 1 | 0 | 18.03 | 18.29 | 18.31 |
| | | 1 | 2 | 17.91 | 18.50 | 18.00 |
| | | 1 | 5 | 18.01 | 18.04 | 18.01 |
| | | 3 | 0 | 17.96 | 18.47 | 18.21 |
| | | 3 | 1 | 17.84 | 18.20 | 18.02 |
| | | 3 | 3 | 18.04 | 17.99 | 18.05 |
| | | 6 | 0 | 18.27 | 17.95 | 18.14 |

| LTE Band 66 | | | | | | |
|---|---|---|---|---|---|---|
| BW | MCS Index | RB Size | RB Offset | Low | Mid | High |
| | | Channel | | 132072 | 132322 | 132572 |
| | | Frequency (MHz) | | 1720 | 1745 | 1770 |
| 20M | QPSK | 1 | 0 | 23.38 | 23.35 | 23.29 |
| | | 1 | 50 | 23.37 | 23.16 | 23.17 |
| | | 1 | 99 | 22.88 | 23.35 | 23.32 |
| | | 50 | 0 | 22.38 | 22.45 | 22.05 |
| | | 50 | 25 | 22.29 | 22.41 | 22.44 |
| | | 50 | 50 | 21.95 | 22.43 | 22.12 |
| | | 100 | 0 | 22.05 | 22.49 | 22.45 |
| 20M | 16QAM | 1 | 0 | 22.29 | 22.81 | 22.69 |
| | | 1 | 50 | 21.99 | 22.73 | 22.72 |
| | | 1 | 99 | 22.17 | 22.25 | 22.36 |
| | | 50 | 0 | 20.98 | 21.67 | 21.60 |
| | | 50 | 25 | 21.06 | 21.62 | 21.64 |
| | | 50 | 50 | 20.92 | 21.13 | 21.02 |
| | | 100 | 0 | 21.18 | 21.35 | 21.61 |
| 20M | 64QAM | 1 | 0 | 20.76 | 20.78 | 21.24 |
| | | 1 | 50 | 20.72 | 20.79 | 20.74 |
| | | 1 | 99 | 20.75 | 20.74 | 20.79 |
| | | 50 | 0 | 19.80 | 20.34 | 19.98 |
| | | 50 | 25 | 19.72 | 19.85 | 19.71 |
| | | 50 | 50 | 19.85 | 19.99 | 19.84 |
| | | 100 | 0 | 19.83 | 19.83 | 19.91 |
| 20M | 256QAM | 1 | 0 | 18.34 | 18.45 | 18.45 |
| | | 1 | 50 | 18.06 | 18.44 | 18.45 |
| | | 1 | 99 | 18.43 | 18.39 | 18.35 |
| | | 50 | 0 | 18.22 | 18.23 | 18.25 |
| | | 50 | 25 | 18.24 | 18.21 | 18.21 |
| | | 50 | 50 | 17.89 | 18.27 | 18.06 |
| | | 100 | 0 | 18.11 | 18.28 | 18.24 |

| LTE Band 66 | | | | | | |
|---|---|---|---|---|---|---|
| BW | MCS Index | RB Size | RB Offset | Low | Mid | High |
| | | Channel | | 132047 | 132322 | 132597 |
| | | Frequency (MHz) | | 1717.5 | 1745 | 1772.5 |
| 15M | QPSK | 1 | 0 | 23.28 | 23.11 | 23.22 |
| | | 1 | 37 | 23.24 | 23.14 | 23.02 |
| | | 1 | 74 | 22.77 | 23.05 | 23.15 |
| | | 36 | 0 | 21.94 | 22.34 | 22.27 |
| | | 36 | 19 | 22.10 | 22.28 | 22.53 |
| | | 36 | 39 | 22.30 | 22.43 | 22.10 |
| | | 75 | 0 | 22.23 | 22.19 | 22.59 |
| 15M | 16QAM | 1 | 0 | 22.02 | 22.28 | 22.23 |
| | | 1 | 37 | 22.32 | 22.35 | 22.38 |
| | | 1 | 74 | 22.29 | 22.26 | 22.18 |
| | | 36 | 0 | 20.86 | 21.27 | 21.23 |
| | | 36 | 19 | 20.90 | 21.45 | 21.40 |
| | | 36 | 39 | 21.00 | 21.32 | 21.27 |
| | | 75 | 0 | 21.37 | 21.23 | 21.29 |
| 15M | 64QAM | 1 | 0 | 20.86 | 21.24 | 21.08 |
| | | 1 | 37 | 20.88 | 20.89 | 20.76 |
| | | 1 | 74 | 20.73 | 20.80 | 20.82 |
| | | 36 | 0 | 19.85 | 20.12 | 20.28 |
| | | 36 | 19 | 19.84 | 20.11 | 19.70 |
| | | 36 | 39 | 19.79 | 19.79 | 19.78 |
| | | 75 | 0 | 19.83 | 19.77 | 19.77 |
| 15M | 256QAM | 1 | 0 | 18.15 | 18.74 | 18.32 |
| | | 1 | 37 | 18.25 | 18.28 | 18.19 |
| | | 1 | 74 | 18.20 | 18.25 | 18.40 |
| | | 36 | 0 | 17.97 | 18.20 | 18.29 |
| | | 36 | 19 | 18.22 | 18.25 | 18.27 |
| | | 36 | 39 | 17.85 | 18.27 | 18.33 |
| | | 75 | 0 | 18.24 | 18.27 | 18.23 |

| LTE Band 66 | | | | | | |
|---|---|---|---|---|---|---|
| BW | MCS Index | RB Size | RB Offset | Low | Mid | High |
| | | Channel | | 132022 | 132322 | 132622 |
| | | Frequency (MHz) | | 1715 | 1745 | 1775 |
| 10M | QPSK | 1 | 0 | 23.24 | 23.20 | 23.07 |
| | | 1 | 24 | 23.19 | 23.06 | 22.91 |
| | | 1 | 49 | 22.98 | 22.99 | 23.07 |
| | | 25 | 0 | 21.71 | 22.31 | 22.30 |
| | | 25 | 12 | 21.88 | 22.37 | 22.36 |
| | | 25 | 25 | 21.89 | 22.39 | 22.38 |
| | | 50 | 0 | 21.97 | 22.32 | 22.01 |
| 10M | 16QAM | 1 | 0 | 22.25 | 22.20 | 22.23 |
| | | 1 | 24 | 21.82 | 22.23 | 22.58 |
| | | 1 | 49 | 22.29 | 22.27 | 22.16 |
| | | 25 | 0 | 21.06 | 21.12 | 21.16 |
| | | 25 | 12 | 21.17 | 20.97 | 21.12 |
| | | 25 | 25 | 21.07 | 21.05 | 21.11 |
| | | 50 | 0 | 21.06 | 21.29 | 21.25 |
| 10M | 64QAM | 1 | 0 | 20.71 | 20.77 | 20.77 |
| | | 1 | 24 | 20.76 | 20.75 | 20.81 |
| | | 1 | 49 | 20.75 | 20.72 | 20.82 |
| | | 25 | 0 | 19.75 | 20.00 | 20.14 |
| | | 25 | 12 | 19.76 | 20.03 | 19.92 |
| | | 25 | 25 | 19.74 | 19.78 | 19.85 |
| | | 50 | 0 | 19.79 | 19.77 | 19.76 |
| 10M | 256QAM | 1 | 0 | 18.13 | 18.23 | 18.22 |
| | | 1 | 24 | 17.89 | 18.29 | 18.11 |
| | | 1 | 49 | 18.13 | 18.20 | 18.14 |
| | | 25 | 0 | 17.78 | 18.23 | 18.13 |
| | | 25 | 12 | 18.04 | 18.29 | 17.84 |
| | | 25 | 25 | 17.83 | 18.25 | 17.89 |
| | | 50 | 0 | 18.24 | 18.20 | 18.26 |

| LTE Band 66 | | | | | | |
|---|---|---|---|---|---|---|
| BW | MCS Index | RB Size | RB Offset | Low | Mid | High |
| | | Channel | | 131997 | 132322 | 132647 |
| | | Frequency (MHz) | | 1712.5 | 1745 | 1777.5 |
| 5M | QPSK | 1 | 0 | 23.23 | 23.28 | 23.02 |
| | | 1 | 12 | 23.29 | 23.25 | 22.95 |
| | | 1 | 24 | 22.86 | 23.17 | 22.85 |
| | | 12 | 0 | 22.11 | 22.29 | 22.37 |
| | | 12 | 6 | 21.74 | 22.61 | 22.40 |
| | | 12 | 13 | 22.06 | 22.55 | 22.10 |
| | | 25 | 0 | 22.27 | 22.22 | 22.12 |
| 5M | 16QAM | 1 | 0 | 22.29 | 22.79 | 22.63 |
| | | 1 | 12 | 22.10 | 22.28 | 22.22 |
| | | 1 | 24 | 22.29 | 22.32 | 22.05 |
| | | 12 | 0 | 21.20 | 21.30 | 21.15 |
| | | 12 | 6 | 20.72 | 21.21 | 21.26 |
| | | 12 | 13 | 20.76 | 21.07 | 21.17 |
| | | 25 | 0 | 20.74 | 21.26 | 21.27 |
| 5M | 64QAM | 1 | 0 | 20.72 | 21.05 | 20.96 |
| | | 1 | 12 | 20.73 | 20.86 | 20.80 |
| | | 1 | 24 | 20.77 | 20.76 | 20.72 |
| | | 12 | 0 | 19.85 | 19.82 | 20.10 |
| | | 12 | 6 | 19.83 | 19.80 | 19.74 |
| | | 12 | 13 | 19.74 | 19.79 | 19.75 |
| | | 25 | 0 | 19.77 | 19.72 | 19.79 |
| 5M | 256QAM | 1 | 0 | 18.17 | 18.31 | 18.29 |
| | | 1 | 12 | 17.95 | 18.31 | 18.20 |
| | | 1 | 24 | 18.05 | 18.28 | 18.24 |
| | | 12 | 0 | 17.95 | 18.13 | 18.28 |
| | | 12 | 6 | 18.21 | 17.99 | 18.15 |
| | | 12 | 13 | 17.78 | 18.08 | 18.22 |
| | | 25 | 0 | 17.74 | 18.19 | 18.13 |

| LTE Band 66 | | | | | | |
|---|---|---|---|---|---|---|
| BW | MCS Index | RB Size | RB Offset | Low | Mid | High |
| | | Channel | | 131987 | 132322 | 132657 |
| | | Frequency (MHz) | | 1711.5 | 1745 | 1778.5 |
| 3M | QPSK | 1 | 0 | 23.25 | 23.23 | 23.28 |
| | | 1 | 7 | 23.24 | 23.22 | 23.23 |
| | | 1 | 14 | 23.23 | 23.13 | 22.78 |
| | | 8 | 0 | 22.02 | 22.14 | 22.39 |
| | | 8 | 3 | 21.74 | 22.32 | 22.02 |
| | | 8 | 7 | 21.84 | 22.15 | 22.39 |
| | | 15 | 0 | 22.31 | 22.24 | 23.25 |
| 3M | 16QAM | 1 | 0 | 22.31 | 22.37 | 22.33 |
| | | 1 | 7 | 22.36 | 22.36 | 22.34 |
| | | 1 | 14 | 22.08 | 22.36 | 22.30 |
| | | 8 | 0 | 21.30 | 20.96 | 21.28 |
| | | 8 | 3 | 20.82 | 21.10 | 21.07 |
| | | 8 | 7 | 21.05 | 21.26 | 20.95 |
| | | 15 | 0 | 21.05 | 21.26 | 21.03 |
| 3M | 64QAM | 1 | 0 | 20.77 | 20.78 | 21.00 |
| | | 1 | 7 | 20.86 | 20.97 | 20.79 |
| | | 1 | 14 | 20.84 | 20.90 | 20.82 |
| | | 8 | 0 | 19.77 | 19.71 | 19.93 |
| | | 8 | 3 | 19.74 | 19.78 | 19.77 |
| | | 8 | 7 | 19.82 | 19.88 | 19.76 |
| | | 15 | 0 | 19.84 | 19.74 | 19.78 |
| 3M | 256QAM | 1 | 0 | 18.00 | 18.37 | 18.44 |
| | | 1 | 7 | 18.39 | 18.40 | 18.42 |
| | | 1 | 14 | 18.23 | 18.22 | 18.27 |
| | | 8 | 0 | 18.25 | 18.01 | 18.26 |
| | | 8 | 3 | 17.72 | 18.29 | 18.29 |
| | | 8 | 7 | 17.91 | 18.10 | 17.93 |
| | | 15 | 0 | 17.87 | 18.25 | 18.09 |

| LTE Band 66 | | | | | | |
|---|---|---|---|---|---|---|
| BW | MCS Index | RB Size | RB Offset | Low | Mid | High |
| | | Channel | | 131979 | 132322 | 132665 |
| | | Frequency (MHz) | | 1710.7 | 1745 | 1779.3 |
| 1.4M | QPSK | 1 | 0 | 23.23 | 23.24 | 23.23 |
| | | 1 | 2 | 23.23 | 23.17 | 23.20 |
| | | 1 | 5 | 22.97 | 23.16 | 23.26 |
| | | 3 | 0 | 23.21 | 23.26 | 23.21 |
| | | 3 | 1 | 22.79 | 23.30 | 23.28 |
| | | 3 | 3 | 23.00 | 23.17 | 22.97 |
| | | 6 | 0 | 22.38 | 22.40 | 22.52 |
| 1.4M | 16QAM | 1 | 0 | 22.39 | 22.46 | 22.54 |
| | | 1 | 2 | 21.86 | 22.38 | 22.24 |
| | | 1 | 5 | 22.36 | 22.26 | 22.39 |
| | | 3 | 0 | 22.03 | 22.13 | 22.23 |
| | | 3 | 1 | 22.22 | 22.08 | 22.22 |
| | | 3 | 3 | 21.84 | 22.00 | 22.07 |
| | | 6 | 0 | 21.22 | 21.40 | 21.71 |
| 1.4M | 64QAM | 1 | 0 | 20.77 | 20.76 | 20.78 |
| | | 1 | 2 | 20.72 | 20.71 | 20.71 |
| | | 1 | 5 | 20.73 | 20.76 | 20.74 |
| | | 3 | 0 | 20.88 | 20.78 | 20.93 |
| | | 3 | 1 | 20.75 | 20.72 | 20.77 |
| | | 3 | 3 | 20.77 | 20.72 | 20.79 |
| | | 6 | 0 | 19.96 | 19.90 | 19.89 |
| 1.4M | 256QAM | 1 | 0 | 18.24 | 18.38 | 18.60 |
| | | 1 | 2 | 18.19 | 18.57 | 18.42 |
| | | 1 | 5 | 18.00 | 18.53 | 18.53 |
| | | 3 | 0 | 18.01 | 18.17 | 18.42 |
| | | 3 | 1 | 17.78 | 17.92 | 18.18 |
| | | 3 | 3 | 17.76 | 18.20 | 18.15 |
| | | 6 | 0 | 17.92 | 18.18 | 18.17 |

**ERP Power (dBm)**

| NR Band 71 | | | | | | |
|---|---|---|---|---|---|---|
| BW | MCS Index | RB Size | RB Offset | Low | Mid | High |
| | | Channel | | 134600 | 136100 | 137600 |
| | | Frequency (MHz) | | 673 | 680.5 | 688 |
| 20M | $\pi/2$ BPSK | 1 | 1 | 16.98 | 16.68 | 16.59 |
| 20M | QPSK | 1 | 1 | 17.02 | 16.72 | 16.63 |
| | | 1 | 53 | 16.68 | 16.56 | 16.50 |
| | | 1 | 104 | 16.63 | 16.54 | 16.48 |
| | | 50 | 0 | 15.82 | 15.64 | 15.50 |
| | | 50 | 28 | 16.83 | 16.58 | 16.54 |
| | | 50 | 56 | 15.70 | 15.57 | 15.53 |
| | | 100 | 0 | 15.81 | 15.66 | 15.54 |
| 20M | 16QAM | 1 | 1 | 15.92 | 15.62 | 15.53 |
| 20M | 64QAM | 1 | 1 | 14.62 | 14.32 | 14.23 |
| 20M | 256QAM | 1 | 1 | 12.73 | 12.43 | 12.34 |
| BW | MCS Index | Channel | | 134100 | 136100 | 138100 |
| | | Frequency (MHz) | | 670.5 | 680.5 | 690.5 |
| 15M | $\pi/2$ BPSK | 1 | 1 | 16.95 | 16.61 | 16.58 |
| 15M | QPSK | 1 | 1 | 16.92 | 16.72 | 16.63 |
| | | 1 | 40 | 16.62 | 16.55 | 16.46 |
| | | 1 | 77 | 16.61 | 16.47 | 16.41 |
| | | 36 | 0 | 15.79 | 15.56 | 15.48 |
| | | 36 | 22 | 16.81 | 16.57 | 16.44 |
| | | 36 | 43 | 15.61 | 15.51 | 15.47 |
| | | 75 | 0 | 15.71 | 15.64 | 15.54 |
| 15M | 16QAM | 1 | 1 | 15.91 | 15.58 | 15.48 |
| 15M | 64QAM | 1 | 1 | 14.54 | 14.24 | 14.20 |
| 15M | 256QAM | 1 | 1 | 12.72 | 12.33 | 12.29 |

*ERP = Conducted + antenna gain (-3.6dBi)-2.15

| NR Band 71 | | | | | | |
|---|---|---|---|---|---|---|
| BW | MCS Index | RB Size | RB Offset | Low | Mid | High |
| | | Channel | | 133600 | 136100 | 138600 |
| | | Frequency (MHz) | | 668 | 680.5 | 693 |
| 10M | $\pi/2$ BPSK | 1 | 1 | 16.91 | 16.58 | 16.53 |
| 10M | QPSK | 1 | 1 | 16.92 | 16.62 | 16.53 |
| | | 1 | 26 | 16.67 | 16.49 | 16.44 |
| | | 1 | 50 | 16.63 | 16.54 | 16.46 |
| | | 25 | 0 | 15.78 | 15.60 | 15.44 |
| | | 25 | 14 | 16.73 | 16.55 | 16.51 |
| | | 25 | 27 | 15.60 | 15.57 | 15.49 |
| | | 50 | 0 | 15.76 | 15.65 | 15.50 |
| 10M | 16QAM | 1 | 1 | 15.86 | 15.54 | 15.47 |
| 10M | 64QAM | 1 | 1 | 14.62 | 14.25 | 14.15 |
| 10M | 256QAM | 1 | 1 | 12.67 | 12.37 | 12.33 |
| BW | MCS Index | Channel | | 133100 | 136100 | 139100 |
| | | Frequency (MHz) | | 665.5 | 680.5 | 695.5 |
| 5M | $\pi/2$ BPSK | 1 | 1 | 16.94 | 16.67 | 16.54 |
| 5M | QPSK | 1 | 1 | 16.99 | 16.68 | 16.60 |
| | | 1 | 13 | 16.65 | 16.51 | 16.48 |
| | | 1 | 23 | 16.57 | 16.50 | 16.48 |
| | | 12 | 0 | 15.77 | 15.59 | 15.45 |
| | | 12 | 7 | 16.78 | 16.57 | 16.51 |
| | | 12 | 13 | 15.70 | 15.49 | 15.53 |
| | | 25 | 0 | 15.77 | 15.63 | 15.49 |
| 5M | 16QAM | 1 | 1 | 15.89 | 15.60 | 15.51 |
| 5M | 64QAM | 1 | 1 | 14.58 | 14.25 | 14.21 |
| 5M | 256QAM | 1 | 1 | 12.63 | 12.33 | 12.34 |

*ERP = Conducted + antenna gain (-3.6dBi)-2.15

**EIRP (dBm)**

| LTE Band 2 | | | | | | |
|---|---|---|---|---|---|---|
| BW | MCS Index | RB Size | RB Offset | Low | Mid | High |
| | | Channel | | 18700 | 18900 | 19100 |
| | | Frequency (MHz) | | 1860 | 1880 | 1900 |
| 20M | QPSK | 1 | 0 | 22.35 | 22.36 | 22.34 |
| | | 1 | 50 | 22.23 | 22.05 | 22.27 |
| | | 1 | 99 | 21.91 | 21.92 | 22.05 |
| | | 50 | 0 | 21.69 | 21.25 | 21.52 |
| | | 50 | 25 | 21.45 | 21.18 | 21.51 |
| | | 50 | 50 | 21.09 | 21.50 | 21.13 |
| | | 100 | 0 | 21.23 | 21.39 | 21.21 |
| 20M | 16QAM | 1 | 0 | 21.51 | 21.45 | 21.14 |
| | | 1 | 50 | 21.32 | 21.54 | 21.13 |
| | | 1 | 99 | 21.54 | 21.37 | 21.13 |
| | | 50 | 0 | 20.14 | 20.50 | 20.22 |
| | | 50 | 25 | 20.60 | 20.72 | 20.10 |
| | | 50 | 50 | 20.26 | 20.13 | 20.30 |
| | | 100 | 0 | 20.01 | 20.14 | 20.13 |
| 20M | 64QAM | 1 | 0 | 20.63 | 20.41 | 20.36 |
| | | 1 | 50 | 20.58 | 20.61 | 20.49 |
| | | 1 | 99 | 20.61 | 20.65 | 20.55 |
| | | 50 | 0 | 19.37 | 19.19 | 19.54 |
| | | 50 | 25 | 19.43 | 19.66 | 19.18 |
| | | 50 | 50 | 19.43 | 19.22 | 19.23 |
| | | 100 | 0 | 19.38 | 19.68 | 19.40 |
| 20M | 256QAM | 1 | 0 | 17.24 | 17.34 | 17.60 |
| | | 1 | 50 | 17.36 | 17.77 | 17.16 |
| | | 1 | 99 | 17.47 | 17.36 | 17.09 |
| | | 50 | 0 | 17.49 | 17.76 | 17.17 |
| | | 50 | 25 | 17.61 | 17.57 | 17.23 |
| | | 50 | 50 | 17.33 | 17.17 | 17.02 |
| | | 100 | 0 | 17.12 | 17.40 | 17.44 |

*EIRP = Conducted + antenna gain (-0.8dBi)

| LTE Band 2 | | | | | | |
|---|---|---|---|---|---|---|
| BW | MCS Index | RB Size | RB Offset | Low | Mid | High |
| | | Channel | | 18675 | 18900 | 19125 |
| | | Frequency (MHz) | | 1857.5 | 1880 | 1902.5 |
| 15M | QPSK | 1 | 0 | 22.02 | 22.24 | 22.20 |
| | | 1 | 37 | 22.19 | 22.16 | 22.17 |
| | | 1 | 74 | 22.14 | 22.20 | 22.16 |
| | | 36 | 0 | 21.42 | 21.19 | 21.02 |
| | | 36 | 19 | 21.45 | 21.16 | 21.05 |
| | | 36 | 39 | 21.40 | 21.06 | 21.35 |
| | | 75 | 0 | 21.24 | 21.27 | 21.21 |
| 15M | 16QAM | 1 | 0 | 21.48 | 21.35 | 21.27 |
| | | 1 | 37 | 21.32 | 21.68 | 21.48 |
| | | 1 | 74 | 21.46 | 21.47 | 21.52 |
| | | 36 | 0 | 20.24 | 20.66 | 20.29 |
| | | 36 | 19 | 20.47 | 20.68 | 20.57 |
| | | 36 | 39 | 20.42 | 20.18 | 20.05 |
| | | 75 | 0 | 20.23 | 20.32 | 20.39 |
| 15M | 64QAM | 1 | 0 | 20.28 | 20.43 | 20.16 |
| | | 1 | 37 | 20.42 | 20.48 | 20.26 |
| | | 1 | 74 | 20.26 | 20.39 | 20.09 |
| | | 36 | 0 | 19.06 | 19.37 | 19.33 |
| | | 36 | 19 | 19.40 | 19.31 | 19.31 |
| | | 36 | 39 | 18.93 | 19.52 | 19.39 |
| | | 75 | 0 | 19.41 | 19.59 | 19.49 |
| 15M | 256QAM | 1 | 0 | 17.64 | 17.60 | 17.18 |
| | | 1 | 37 | 17.24 | 17.73 | 17.10 |
| | | 1 | 74 | 17.21 | 17.44 | 17.03 |
| | | 36 | 0 | 17.31 | 17.73 | 17.05 |
| | | 36 | 19 | 17.41 | 17.62 | 17.11 |
| | | 36 | 39 | 17.21 | 17.24 | 17.01 |
| | | 75 | 0 | 17.45 | 17.13 | 17.37 |

*EIRP = Conducted + antenna gain (-0.8dBi)

| LTE Band 2 | | | | | | |
|---|---|---|---|---|---|---|
| BW | MCS Index | RB Size | RB Offset | Low | Mid | High |
| | | Channel | | 18650 | 18900 | 19150 |
| | | Frequency (MHz) | | 1855 | 1880 | 1905 |
| 10M | QPSK | 1 | 0 | 22.28 | 22.15 | 22.26 |
| | | 1 | 24 | 22.05 | 22.04 | 22.02 |
| | | 1 | 49 | 22.21 | 21.98 | 21.93 |
| | | 25 | 0 | 21.44 | 21.69 | 21.17 |
| | | 25 | 12 | 21.34 | 21.42 | 21.30 |
| | | 25 | 25 | 20.93 | 20.99 | 21.00 |
| | | 50 | 0 | 21.26 | 21.18 | 20.94 |
| 10M | 16QAM | 1 | 0 | 21.16 | 21.49 | 21.46 |
| | | 1 | 24 | 21.26 | 21.22 | 21.12 |
| | | 1 | 49 | 21.32 | 21.33 | 20.96 |
| | | 25 | 0 | 20.02 | 20.49 | 20.53 |
| | | 25 | 12 | 20.07 | 20.17 | 20.38 |
| | | 25 | 25 | 20.42 | 20.45 | 19.97 |
| | | 50 | 0 | 20.21 | 19.93 | 20.25 |
| 10M | 64QAM | 1 | 0 | 20.64 | 20.54 | 20.02 |
| | | 1 | 24 | 20.63 | 20.13 | 20.50 |
| | | 1 | 49 | 20.27 | 20.35 | 20.42 |
| | | 25 | 0 | 19.18 | 19.48 | 19.40 |
| | | 25 | 12 | 19.24 | 19.47 | 19.17 |
| | | 25 | 25 | 19.20 | 19.29 | 19.05 |
| | | 50 | 0 | 19.15 | 19.42 | 19.36 |
| 10M | 256QAM | 1 | 0 | 17.69 | 17.09 | 17.54 |
| | | 1 | 24 | 17.63 | 17.30 | 17.53 |
| | | 1 | 49 | 17.51 | 17.24 | 17.32 |
| | | 25 | 0 | 17.66 | 17.51 | 17.03 |
| | | 25 | 12 | 17.48 | 17.23 | 17.38 |
| | | 25 | 25 | 17.21 | 17.32 | 17.11 |
| | | 50 | 0 | 17.39 | 17.29 | 17.39 |

*EIRP = Conducted + antenna gain (-0.8dBi)

| LTE Band 2 | | | | | | |
|---|---|---|---|---|---|---|
| BW | MCS Index | RB Size | RB Offset | Low | Mid | High |
| | | Channel | | 18625 | 18900 | 19175 |
| | | Frequency (MHz) | | 1852.5 | 1880 | 1907.5 |
| 5M | QPSK | 1 | 0 | 21.92 | 22.15 | 22.03 |
| | | 1 | 12 | 21.96 | 22.13 | 21.93 |
| | | 1 | 24 | 21.93 | 22.14 | 21.99 |
| | | 12 | 0 | 21.53 | 21.41 | 21.48 |
| | | 12 | 6 | 21.01 | 21.07 | 21.28 |
| | | 12 | 13 | 21.09 | 21.14 | 21.09 |
| | | 25 | 0 | 21.06 | 20.94 | 20.96 |
| 5M | 16QAM | 1 | 0 | 20.99 | 21.49 | 21.26 |
| | | 1 | 12 | 21.43 | 21.34 | 21.20 |
| | | 1 | 24 | 21.37 | 21.29 | 20.95 |
| | | 12 | 0 | 20.18 | 20.59 | 20.10 |
| | | 12 | 6 | 20.47 | 20.01 | 20.20 |
| | | 12 | 13 | 20.28 | 20.30 | 20.18 |
| | | 25 | 0 | 20.17 | 20.24 | 20.10 |
| 5M | 64QAM | 1 | 0 | 20.13 | 20.21 | 20.33 |
| | | 1 | 12 | 20.27 | 20.35 | 20.02 |
| | | 1 | 24 | 20.09 | 20.18 | 20.10 |
| | | 12 | 0 | 19.10 | 19.44 | 19.09 |
| | | 12 | 6 | 18.93 | 19.30 | 19.38 |
| | | 12 | 13 | 19.31 | 18.97 | 19.18 |
| | | 25 | 0 | 19.37 | 19.26 | 19.35 |
| 5M | 256QAM | 1 | 0 | 17.71 | 17.35 | 17.36 |
| | | 1 | 12 | 17.41 | 17.16 | 17.31 |
| | | 1 | 24 | 17.16 | 17.24 | 17.19 |
| | | 12 | 0 | 17.45 | 17.48 | 17.06 |
| | | 12 | 6 | 17.50 | 17.35 | 17.26 |
| | | 12 | 13 | 17.23 | 17.45 | 17.04 |
| | | 25 | 0 | 17.45 | 17.01 | 16.93 |

*EIRP = Conducted + antenna gain (-0.8dBi)

| LTE Band 2 | | | | | | |
|---|---|---|---|---|---|---|
| BW | MCS Index | RB Size | RB Offset | Low | Mid | High |
| | | Channel | | 18615 | 18900 | 19185 |
| | | Frequency (MHz) | | 1851.5 | 1880 | 1908.5 |
| 3M | QPSK | 1 | 0 | 22.42 | 22.35 | 22.18 |
| | | 1 | 7 | 21.95 | 22.00 | 22.07 |
| | | 1 | 14 | 21.99 | 22.05 | 21.92 |
| | | 8 | 0 | 21.36 | 21.19 | 20.96 |
| | | 8 | 3 | 21.26 | 21.28 | 21.18 |
| | | 8 | 7 | 21.01 | 21.39 | 21.08 |
| | | 15 | 0 | 21.02 | 21.42 | 21.37 |
| 3M | 16QAM | 1 | 0 | 21.59 | 21.59 | 21.51 |
| | | 1 | 7 | 21.11 | 21.30 | 21.30 |
| | | 1 | 14 | 21.33 | 21.33 | 21.31 |
| | | 8 | 0 | 20.09 | 20.12 | 20.28 |
| | | 8 | 3 | 20.01 | 20.36 | 20.28 |
| | | 8 | 7 | 20.29 | 20.35 | 20.16 |
| | | 15 | 0 | 20.07 | 20.35 | 20.16 |
| 3M | 64QAM | 1 | 0 | 20.16 | 20.43 | 20.29 |
| | | 1 | 7 | 20.42 | 20.30 | 20.28 |
| | | 1 | 14 | 20.23 | 20.07 | 19.95 |
| | | 8 | 0 | 19.12 | 19.33 | 18.91 |
| | | 8 | 3 | 19.21 | 19.08 | 19.37 |
| | | 8 | 7 | 19.03 | 19.31 | 19.26 |
| | | 15 | 0 | 19.18 | 19.25 | 19.06 |
| 3M | 256QAM | 1 | 0 | 17.60 | 17.64 | 17.36 |
| | | 1 | 7 | 17.25 | 17.35 | 17.38 |
| | | 1 | 14 | 17.10 | 17.64 | 17.59 |
| | | 8 | 0 | 17.32 | 17.58 | 17.68 |
| | | 8 | 3 | 17.17 | 17.07 | 17.14 |
| | | 8 | 7 | 17.20 | 17.42 | 17.12 |
| | | 15 | 0 | 17.15 | 17.33 | 17.23 |

*EIRP = Conducted + antenna gain (-0.8dBi)

| LTE Band 2 | | | | | | |
|---|---|---|---|---|---|---|
| BW | MCS Index | RB Size | RB Offset | Low | Mid | High |
| | | Channel | | 18607 | 18900 | 19193 |
| | | Frequency (MHz) | | 1850.7 | 1880 | 1909.3 |
| 1.4M | QPSK | 1 | 0 | 22.30 | 22.25 | 22.23 |
| | | 1 | 2 | 22.09 | 22.08 | 22.16 |
| | | 1 | 5 | 21.94 | 22.24 | 22.14 |
| | | 3 | 0 | 22.06 | 22.08 | 22.12 |
| | | 3 | 1 | 22.09 | 22.37 | 22.19 |
| | | 3 | 3 | 22.02 | 22.08 | 21.90 |
| | | 6 | 0 | 21.18 | 21.37 | 20.99 |
| 1.4M | 16QAM | 1 | 0 | 21.59 | 21.54 | 20.99 |
| | | 1 | 2 | 21.06 | 21.33 | 21.52 |
| | | 1 | 5 | 21.33 | 21.33 | 21.24 |
| | | 3 | 0 | 21.08 | 21.38 | 21.36 |
| | | 3 | 1 | 21.35 | 21.04 | 21.26 |
| | | 3 | 3 | 21.27 | 21.55 | 21.39 |
| | | 6 | 0 | 20.23 | 20.22 | 20.05 |
| 1.4M | 64QAM | 1 | 0 | 20.45 | 20.44 | 19.97 |
| | | 1 | 2 | 20.43 | 20.37 | 20.20 |
| | | 1 | 5 | 20.09 | 20.40 | 20.23 |
| | | 3 | 0 | 20.45 | 20.48 | 19.94 |
| | | 3 | 1 | 20.12 | 20.25 | 20.05 |
| | | 3 | 3 | 20.31 | 20.26 | 20.08 |
| | | 6 | 0 | 19.04 | 19.16 | 19.28 |
| 1.4M | 256QAM | 1 | 0 | 17.23 | 17.49 | 17.51 |
| | | 1 | 2 | 17.11 | 17.70 | 17.20 |
| | | 1 | 5 | 17.21 | 17.24 | 17.21 |
| | | 3 | 0 | 17.16 | 17.67 | 17.41 |
| | | 3 | 1 | 17.04 | 17.40 | 17.22 |
| | | 3 | 3 | 17.24 | 17.19 | 17.25 |
| | | 6 | 0 | 17.47 | 17.15 | 17.34 |

*EIRP = Conducted + antenna gain (-0.8dBi)

| LTE Band 66 | | | | | | |
|---|---|---|---|---|---|---|
| BW | MCS Index | RB Size | RB Offset | Low | Mid | High |
| | | Channel | | 132072 | 132322 | 132572 |
| | | Frequency (MHz) | | 1720 | 1745 | 1770 |
| 20M | QPSK | 1 | 0 | 25.68 | 25.65 | 25.59 |
| | | 1 | 50 | 25.67 | 25.46 | 25.47 |
| | | 1 | 99 | 25.18 | 25.65 | 25.62 |
| | | 50 | 0 | 24.68 | 24.75 | 24.35 |
| | | 50 | 25 | 24.59 | 24.71 | 24.74 |
| | | 50 | 50 | 24.25 | 24.73 | 24.42 |
| | | 100 | 0 | 24.35 | 24.79 | 24.75 |
| 20M | 16QAM | 1 | 0 | 24.59 | 25.11 | 24.99 |
| | | 1 | 50 | 24.29 | 25.03 | 25.02 |
| | | 1 | 99 | 24.47 | 24.55 | 24.66 |
| | | 50 | 0 | 23.28 | 23.97 | 23.90 |
| | | 50 | 25 | 23.36 | 23.92 | 23.94 |
| | | 50 | 50 | 23.22 | 23.43 | 23.32 |
| | | 100 | 0 | 23.48 | 23.65 | 23.91 |
| 20M | 64QAM | 1 | 0 | 23.06 | 23.08 | 23.54 |
| | | 1 | 50 | 23.02 | 23.09 | 23.04 |
| | | 1 | 99 | 23.05 | 23.04 | 23.09 |
| | | 50 | 0 | 22.10 | 22.64 | 22.28 |
| | | 50 | 25 | 22.02 | 22.15 | 22.01 |
| | | 50 | 50 | 22.15 | 22.29 | 22.14 |
| | | 100 | 0 | 22.13 | 22.13 | 22.21 |
| 20M | 256QAM | 1 | 0 | 20.64 | 20.75 | 20.75 |
| | | 1 | 50 | 20.36 | 20.74 | 20.75 |
| | | 1 | 99 | 20.73 | 20.69 | 20.65 |
| | | 50 | 0 | 20.52 | 20.53 | 20.55 |
| | | 50 | 25 | 20.54 | 20.51 | 20.51 |
| | | 50 | 50 | 20.19 | 20.57 | 20.36 |
| | | 100 | 0 | 20.41 | 20.58 | 20.54 |

*EIRP = Conducted + antenna gain (2.3dBi)

| LTE Band 66 | | | | | | |
|---|---|---|---|---|---|---|
| BW | MCS Index | RB Size | RB Offset | Low | Mid | High |
| | | Channel | | 132047 | 132322 | 132597 |
| | | Frequency (MHz) | | 1717.5 | 1745 | 1772.5 |
| 15M | QPSK | 1 | 0 | 25.58 | 25.41 | 25.52 |
| | | 1 | 37 | 25.54 | 25.44 | 25.32 |
| | | 1 | 74 | 25.07 | 25.35 | 25.45 |
| | | 36 | 0 | 24.24 | 24.64 | 24.57 |
| | | 36 | 19 | 24.40 | 24.58 | 24.83 |
| | | 36 | 39 | 24.60 | 24.73 | 24.40 |
| | | 75 | 0 | 24.53 | 24.49 | 24.89 |
| 15M | 16QAM | 1 | 0 | 24.32 | 24.58 | 24.53 |
| | | 1 | 37 | 24.62 | 24.65 | 24.68 |
| | | 1 | 74 | 24.59 | 24.56 | 24.48 |
| | | 36 | 0 | 23.16 | 23.57 | 23.53 |
| | | 36 | 19 | 23.20 | 23.75 | 23.70 |
| | | 36 | 39 | 23.30 | 23.62 | 23.57 |
| | | 75 | 0 | 23.67 | 23.53 | 23.59 |
| 15M | 64QAM | 1 | 0 | 23.16 | 23.54 | 23.38 |
| | | 1 | 37 | 23.18 | 23.19 | 23.06 |
| | | 1 | 74 | 23.03 | 23.10 | 23.12 |
| | | 36 | 0 | 22.15 | 22.42 | 22.58 |
| | | 36 | 19 | 22.14 | 22.41 | 22.00 |
| | | 36 | 39 | 22.09 | 22.09 | 22.08 |
| | | 75 | 0 | 22.13 | 22.07 | 22.07 |
| 15M | 256QAM | 1 | 0 | 20.45 | 21.04 | 20.62 |
| | | 1 | 37 | 20.55 | 20.58 | 20.49 |
| | | 1 | 74 | 20.50 | 20.55 | 20.70 |
| | | 36 | 0 | 20.27 | 20.50 | 20.59 |
| | | 36 | 19 | 20.52 | 20.55 | 20.57 |
| | | 36 | 39 | 20.15 | 20.57 | 20.63 |
| | | 75 | 0 | 20.54 | 20.57 | 20.53 |

*EIRP = Conducted + antenna gain (2.3dBi)

| LTE Band 66 | | | | | | |
|---|---|---|---|---|---|---|
| BW | MCS Index | RB Size | RB Offset | Low | Mid | High |
| | | Channel | | 132022 | 132322 | 132622 |
| | | Frequency (MHz) | | 1715 | 1745 | 1775 |
| 10M | QPSK | 1 | 0 | 25.54 | 25.50 | 25.37 |
| | | 1 | 24 | 25.49 | 25.36 | 25.21 |
| | | 1 | 49 | 25.28 | 25.29 | 25.37 |
| | | 25 | 0 | 24.01 | 24.61 | 24.60 |
| | | 25 | 12 | 24.18 | 24.67 | 24.66 |
| | | 25 | 25 | 24.19 | 24.69 | 24.68 |
| | | 50 | 0 | 24.27 | 24.62 | 24.31 |
| 10M | 16QAM | 1 | 0 | 24.55 | 24.50 | 24.53 |
| | | 1 | 24 | 24.12 | 24.53 | 24.88 |
| | | 1 | 49 | 24.59 | 24.57 | 24.46 |
| | | 25 | 0 | 23.36 | 23.42 | 23.46 |
| | | 25 | 12 | 23.47 | 23.27 | 23.42 |
| | | 25 | 25 | 23.37 | 23.35 | 23.41 |
| | | 50 | 0 | 23.36 | 23.59 | 23.55 |
| 10M | 64QAM | 1 | 0 | 23.01 | 23.07 | 23.07 |
| | | 1 | 24 | 23.06 | 23.05 | 23.11 |
| | | 1 | 49 | 23.05 | 23.02 | 23.12 |
| | | 25 | 0 | 22.05 | 22.30 | 22.44 |
| | | 25 | 12 | 22.06 | 22.33 | 22.22 |
| | | 25 | 25 | 22.04 | 22.08 | 22.15 |
| | | 50 | 0 | 22.09 | 22.07 | 22.06 |
| 10M | 256QAM | 1 | 0 | 20.43 | 20.53 | 20.52 |
| | | 1 | 24 | 20.19 | 20.59 | 20.41 |
| | | 1 | 49 | 20.43 | 20.50 | 20.44 |
| | | 25 | 0 | 20.08 | 20.53 | 20.43 |
| | | 25 | 12 | 20.34 | 20.59 | 20.14 |
| | | 25 | 25 | 20.13 | 20.55 | 20.19 |
| | | 50 | 0 | 20.54 | 20.50 | 20.56 |

*EIRP = Conducted + antenna gain (2.3dBi)

| LTE Band 66 | | | | | | |
|---|---|---|---|---|---|---|
| BW | MCS Index | RB Size | RB Offset | Low | Mid | High |
| | | Channel | | 131997 | 132322 | 132647 |
| | | Frequency (MHz) | | 1712.5 | 1745 | 1777.5 |
| 5M | QPSK | 1 | 0 | 25.53 | 25.58 | 25.32 |
| | | 1 | 12 | 25.59 | 25.55 | 25.25 |
| | | 1 | 24 | 25.16 | 25.47 | 25.15 |
| | | 12 | 0 | 24.41 | 24.59 | 24.67 |
| | | 12 | 6 | 24.04 | 24.91 | 24.70 |
| | | 12 | 13 | 24.36 | 24.85 | 24.40 |
| | | 25 | 0 | 24.57 | 24.52 | 24.42 |
| 5M | 16QAM | 1 | 0 | 24.59 | 25.09 | 24.93 |
| | | 1 | 12 | 24.40 | 24.58 | 24.52 |
| | | 1 | 24 | 24.59 | 24.62 | 24.35 |
| | | 12 | 0 | 23.50 | 23.60 | 23.45 |
| | | 12 | 6 | 23.02 | 23.51 | 23.56 |
| | | 12 | 13 | 23.06 | 23.37 | 23.47 |
| | | 25 | 0 | 23.04 | 23.56 | 23.57 |
| 5M | 64QAM | 1 | 0 | 23.02 | 23.35 | 23.26 |
| | | 1 | 12 | 23.03 | 23.16 | 23.10 |
| | | 1 | 24 | 23.07 | 23.06 | 23.02 |
| | | 12 | 0 | 22.15 | 22.12 | 22.40 |
| | | 12 | 6 | 22.13 | 22.10 | 22.04 |
| | | 12 | 13 | 22.04 | 22.09 | 22.05 |
| | | 25 | 0 | 22.07 | 22.02 | 22.09 |
| 5M | 256QAM | 1 | 0 | 20.47 | 20.61 | 20.59 |
| | | 1 | 12 | 20.25 | 20.61 | 20.50 |
| | | 1 | 24 | 20.35 | 20.58 | 20.54 |
| | | 12 | 0 | 20.25 | 20.43 | 20.58 |
| | | 12 | 6 | 20.51 | 20.29 | 20.45 |
| | | 12 | 13 | 20.08 | 20.38 | 20.52 |
| | | 25 | 0 | 20.04 | 20.49 | 20.43 |

*EIRP = Conducted + antenna gain (2.3dBi)

| LTE Band 66 | | | | | | |
|---|---|---|---|---|---|---|
| BW | MCS Index | RB Size | RB Offset | Low | Mid | High |
| | | Channel | | 131987 | 132322 | 132657 |
| | | Frequency (MHz) | | 1711.5 | 1745 | 1778.5 |
| 3M | QPSK | 1 | 0 | 25.55 | 25.53 | 25.58 |
| | | 1 | 7 | 25.54 | 25.52 | 25.53 |
| | | 1 | 14 | 25.53 | 25.43 | 25.08 |
| | | 8 | 0 | 24.32 | 24.44 | 24.69 |
| | | 8 | 3 | 24.04 | 24.62 | 24.32 |
| | | 8 | 7 | 24.14 | 24.45 | 24.69 |
| | | 15 | 0 | 24.61 | 24.54 | 25.55 |
| 3M | 16QAM | 1 | 0 | 24.61 | 24.67 | 24.63 |
| | | 1 | 7 | 24.66 | 24.66 | 24.64 |
| | | 1 | 14 | 24.38 | 24.66 | 24.60 |
| | | 8 | 0 | 23.60 | 23.26 | 23.58 |
| | | 8 | 3 | 23.12 | 23.40 | 23.37 |
| | | 8 | 7 | 23.35 | 23.56 | 23.25 |
| | | 15 | 0 | 23.35 | 23.56 | 23.33 |
| 3M | 64QAM | 1 | 0 | 23.07 | 23.08 | 23.30 |
| | | 1 | 7 | 23.16 | 23.27 | 23.09 |
| | | 1 | 14 | 23.14 | 23.20 | 23.12 |
| | | 8 | 0 | 22.07 | 22.01 | 22.23 |
| | | 8 | 3 | 22.04 | 22.08 | 22.07 |
| | | 8 | 7 | 22.12 | 22.18 | 22.06 |
| | | 15 | 0 | 22.14 | 22.04 | 22.08 |
| 3M | 256QAM | 1 | 0 | 20.30 | 20.67 | 20.74 |
| | | 1 | 7 | 20.69 | 20.70 | 20.72 |
| | | 1 | 14 | 20.53 | 20.52 | 20.57 |
| | | 8 | 0 | 20.55 | 20.31 | 20.56 |
| | | 8 | 3 | 20.02 | 20.59 | 20.59 |
| | | 8 | 7 | 20.21 | 20.40 | 20.23 |
| | | 15 | 0 | 20.17 | 20.55 | 20.39 |

*EIRP = Conducted + antenna gain (2.3dBi)

| LTE Band 66 | | | | | | |
|---|---|---|---|---|---|---|
| BW | MCS Index | RB Size | RB Offset | Low | Mid | High |
| | | Channel | | 131979 | 132322 | 132665 |
| | | Frequency (MHz) | | 1710.7 | 1745 | 1779.3 |
| 1.4M | QPSK | 1 | 0 | 25.53 | 25.54 | 25.53 |
| | | 1 | 2 | 25.53 | 25.47 | 25.50 |
| | | 1 | 5 | 25.27 | 25.46 | 25.56 |
| | | 3 | 0 | 25.51 | 25.56 | 25.51 |
| | | 3 | 1 | 25.09 | 25.60 | 25.58 |
| | | 3 | 3 | 25.30 | 25.47 | 25.27 |
| | | 6 | 0 | 24.68 | 24.70 | 24.82 |
| 1.4M | 16QAM | 1 | 0 | 24.69 | 24.76 | 24.84 |
| | | 1 | 2 | 24.16 | 24.68 | 24.54 |
| | | 1 | 5 | 24.66 | 24.56 | 24.69 |
| | | 3 | 0 | 24.33 | 24.43 | 24.53 |
| | | 3 | 1 | 24.52 | 24.38 | 24.52 |
| | | 3 | 3 | 24.14 | 24.30 | 24.37 |
| | | 6 | 0 | 23.52 | 23.70 | 24.01 |
| 1.4M | 64QAM | 1 | 0 | 23.07 | 23.06 | 23.08 |
| | | 1 | 2 | 23.02 | 23.01 | 23.01 |
| | | 1 | 5 | 23.03 | 23.06 | 23.04 |
| | | 3 | 0 | 23.18 | 23.08 | 23.23 |
| | | 3 | 1 | 23.05 | 23.02 | 23.07 |
| | | 3 | 3 | 23.07 | 23.02 | 23.09 |
| | | 6 | 0 | 22.26 | 22.20 | 22.19 |
| 1.4M | 256QAM | 1 | 0 | 20.54 | 20.68 | 20.90 |
| | | 1 | 2 | 20.49 | 20.87 | 20.72 |
| | | 1 | 5 | 20.30 | 20.83 | 20.83 |
| | | 3 | 0 | 20.31 | 20.47 | 20.72 |
| | | 3 | 1 | 20.08 | 20.22 | 20.48 |
| | | 3 | 3 | 20.06 | 20.50 | 20.45 |
| | | 6 | 0 | 20.22 | 20.48 | 20.47 |

*EIRP = Conducted + antenna gain (2.3dBi)

## 4.2 Modulation Characteristics Measurement

### 4.2.1 Limits of Modulation Characteristics

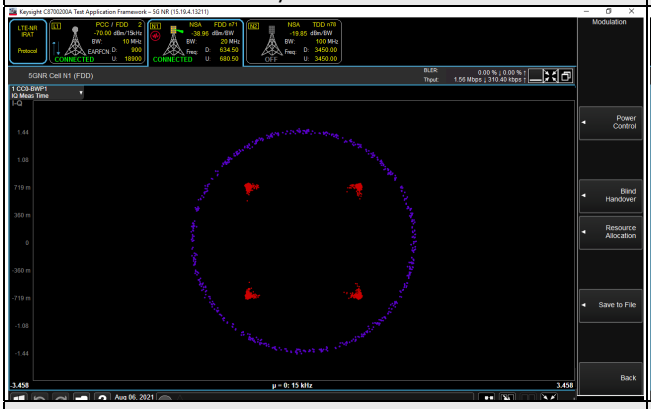
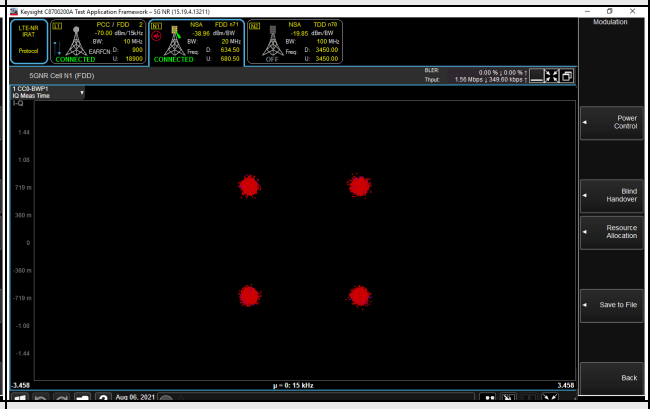
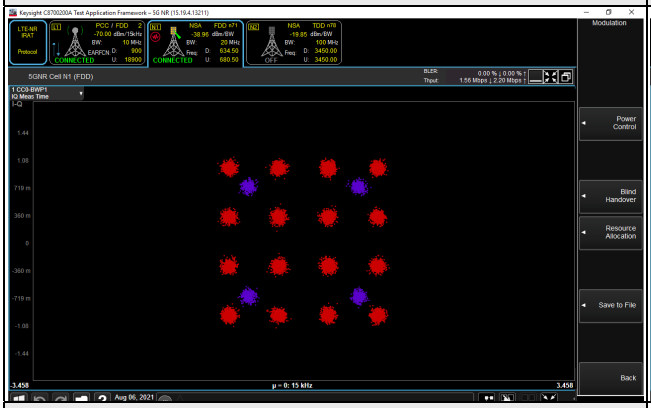
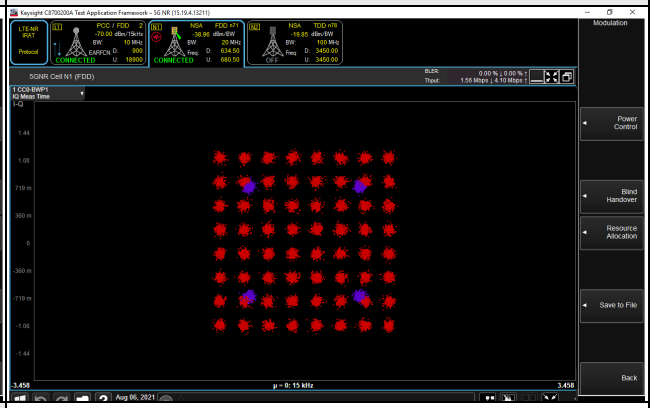
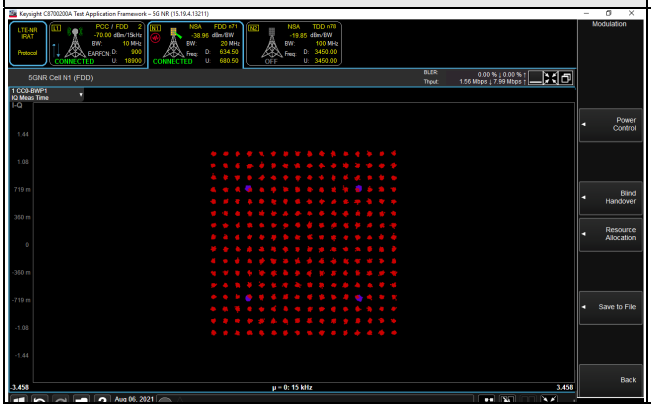
N/A

### 4.2.2 Test Procedure

Connect the EUT to Communication Simulator via the antenna connector, The frequency band is set as EUT supported Modulation and Channels, the EUT output is matched with 50 ohm load, the waveform quality and constellation of the EUT was tested.

### 4.2.3 Test Setup

### 4.2.4 Test Results

| n71 | |
|---|---|
| Spectrum Plot of Measurement Value | |
| Channel: 136100 / Frequency (MHz): 680.5 MHz | |
| $\pi/2$ BPSK | QPSK |
|  |  |
| 16QAM | 64QAM |
|  |  |
| 256QAM | |
|  | |

### 4.3 Frequency Stability Measurement

#### 4.3.1 Limits of Frequency Stability Measurement

1.5 ppm is for base and fixed station. 2.5 ppm is for mobile station.

#### 4.3.2 Test Procedure

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

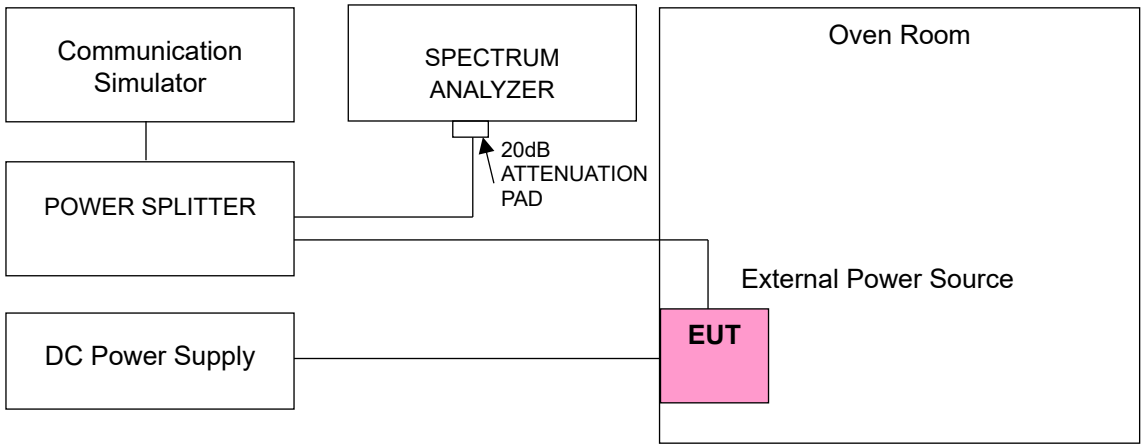
Note: The frequency error was recorded frequency error from the communication simulator.

#### 4.3.3 Test Instruments

| Description & Manufacturer | Model No. | Serial No. | Cal. Date | Cal. Due |
|---|---|---|---|---|
| 5G Wireless Test Platforms Keysight | E7515B | MY60102114 | May 21, 2021 | May 20, 2022 |
| Temperature & Humidity Chamber TERCHY | HRM-120RF | 931022 | Dec. 24, 2020 | Dec. 23, 2021 |
| Digital Multimeter Fluke | 87-III | 70360742 | Jun. 24, 2021 | Jun. 23, 2022 |
| DC Power Supply Topward | 6306A | 727263 | NA | NA |

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

#### 4.3.4 Test Setup



### 4.3.5 Test Results

Frequency Error vs. Voltage

| Voltage (Vdc) | n71 | | | |
|---|---|---|---|---|
| | Channel Bandwidth: 5 MHz | | | |
| | Low Channel | | High Channel | |
| | Frequency (MHz) | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| 3.87 | 665.500036 | 0.054 | 695.500000 | 0.039 |
| 3.28 | 665.500028 | 0.042 | 695.500000 | 0.055 |
| 4.45 | 665.500038 | 0.057 | 695.500000 | 0.020 |

Note: The applicant defined the normal working voltage is from 3.28Vdc to 4.45Vdc.

Frequency Error vs. Temperature

| Temp. (℃) | n71 | | | |
|---|---|---|---|---|
| | Channel Bandwidth: 5 MHz | | | |
| | Low Channel | | High Channel | |
| | Frequency (MHz) | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| -30 | 665.500027 | 0.041 | 695.500000 | 0.032 |
| -20 | 665.500024 | 0.036 | 695.500000 | 0.027 |
| -10 | 665.500020 | 0.030 | 695.500000 | 0.040 |
| 0 | 665.500035 | 0.053 | 695.500000 | 0.024 |
| 10 | 665.500038 | 0.057 | 695.500000 | 0.053 |
| 20 | 665.499965 | -0.053 | 695.500000 | -0.032 |
| 30 | 665.499988 | -0.018 | 695.500000 | -0.049 |
| 40 | 665.499978 | -0.033 | 695.500000 | -0.030 |
| 50 | 665.499985 | -0.023 | 695.500000 | -0.016 |
| 60 | 665.499972 | -0.042 | 695.500000 | -0.029 |

Frequency Error vs. Voltage

| Voltage (Vdc) | n71 | | | |
|---|---|---|---|---|
| | Channel Bandwidth: 10 MHz | | | |
| | Low Channel | | High Channel | |
| | Frequency (MHz) | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| 3.87 | 668.000026 | 0.039 | 693.000029 | 0.042 |
| 3.28 | 668.000040 | 0.060 | 693.000037 | 0.053 |
| 4.45 | 668.000019 | 0.029 | 693.000016 | 0.023 |

Note: The applicant defined the normal working voltage is from 3.28Vdc to 4.45Vdc.

Frequency Error vs. Temperature

| Temp. (℃) | n71 | | | |
|---|---|---|---|---|
| | Channel Bandwidth: 10 MHz | | | |
| | Low Channel | | High Channel | |
| | Frequency (MHz) | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| -30 | 668.000033 | 0.050 | 693.000032 | 0.046 |
| -20 | 668.000036 | 0.054 | 693.000036 | 0.052 |
| -10 | 668.000015 | 0.023 | 693.000014 | 0.020 |
| 0 | 668.000029 | 0.044 | 693.000012 | 0.017 |
| 10 | 668.000022 | 0.033 | 693.000026 | 0.037 |
| 20 | 667.999990 | -0.015 | 692.999987 | -0.019 |
| 30 | 667.999968 | -0.048 | 692.999974 | -0.037 |
| 40 | 667.999982 | -0.027 | 692.999982 | -0.026 |
| 50 | 667.999984 | -0.024 | 692.999977 | -0.033 |
| 60 | 667.999989 | -0.017 | 692.999976 | -0.035 |

Frequency Error vs. Voltage

| Voltage (Vdc) | n71 | | | |
|---|---|---|---|---|
| | Channel Bandwidth: 15 MHz | | | |
| | Low Channel | | High Channel | |
| | Frequency (MHz) | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| 3.87 | 670.500026 | 0.039 | 690.500017 | 0.024 |
| 3.28 | 670.500021 | 0.032 | 690.500026 | 0.037 |
| 4.45 | 670.500029 | 0.044 | 690.500037 | 0.053 |

Note: The applicant defined the normal working voltage is from 3.28Vdc to 4.45Vdc.

Frequency Error vs. Temperature

| Temp. (℃) | n71 | | | |
|---|---|---|---|---|
| | Channel Bandwidth: 15 MHz | | | |
| | Low Channel | | High Channel | |
| | Frequency (MHz) | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| -30 | 670.500014 | 0.021 | 690.500023 | 0.033 |
| -20 | 670.500011 | 0.017 | 690.500020 | 0.029 |
| -10 | 670.500022 | 0.033 | 690.500033 | 0.047 |
| 0 | 670.500022 | 0.033 | 690.500027 | 0.039 |
| 10 | 670.500028 | 0.042 | 690.500034 | 0.049 |
| 20 | 670.499985 | -0.023 | 690.499990 | -0.014 |
| 30 | 670.499970 | -0.045 | 690.499967 | -0.047 |
| 40 | 670.499990 | -0.015 | 690.499960 | -0.058 |
| 50 | 670.499978 | -0.033 | 690.499985 | -0.022 |
| 60 | 670.499967 | -0.050 | 690.499974 | -0.037 |

Frequency Error vs. Voltage

| Voltage (Vdc) | n71 | | | |
|---|---|---|---|---|
| | Channel Bandwidth: 20 MHz | | | |
| | Low Channel | | High Channel | |
| | Frequency (MHz) | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| 3.87 | 673.000014 | 0.021 | 688.000012 | 0.017 |
| 3.28 | 673.000021 | 0.032 | 688.000037 | 0.053 |
| 4.45 | 673.000013 | 0.020 | 688.000027 | 0.039 |

Note: The applicant defined the normal working voltage is from 3.28Vdc to 4.45Vdc.

Frequency Error vs. Temperature

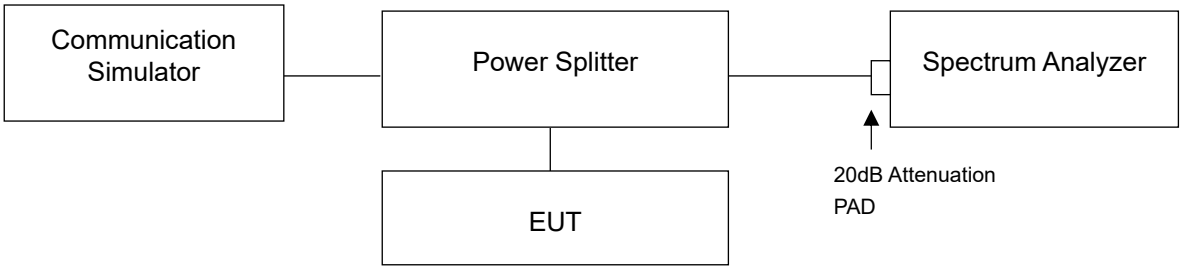
| Temp. (℃) | n71 | | | |
|---|---|---|---|---|
| | Channel Bandwidth: 20 MHz | | | |
| | Low Channel | | High Channel | |
| | Frequency (MHz) | Frequency Error (ppm) | Frequency (MHz) | Frequency Error (ppm) |
| -30 | 673.000020 | 0.030 | 688.000026 | 0.037 |
| -20 | 673.000019 | 0.029 | 688.000031 | 0.045 |
| -10 | 673.000018 | 0.027 | 688.000034 | 0.049 |
| 0 | 673.000023 | 0.035 | 688.000027 | 0.039 |
| 10 | 673.000035 | 0.053 | 688.000020 | 0.029 |
| 20 | 672.999986 | -0.021 | 687.999987 | -0.019 |
| 30 | 672.999967 | -0.050 | 687.999984 | -0.023 |
| 40 | 672.999971 | -0.044 | 687.999989 | -0.016 |
| 50 | 672.999966 | -0.051 | 687.999976 | -0.035 |
| 60 | 672.999969 | -0.047 | 687.999963 | -0.053 |

## 4.4 Occupied Bandwidth Measurement

### 4.4.1 Test Procedure

The occupied bandwidth (OBW), that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 % of the total mean power radiated by a given emission.

### 4.4.2 Test Setup

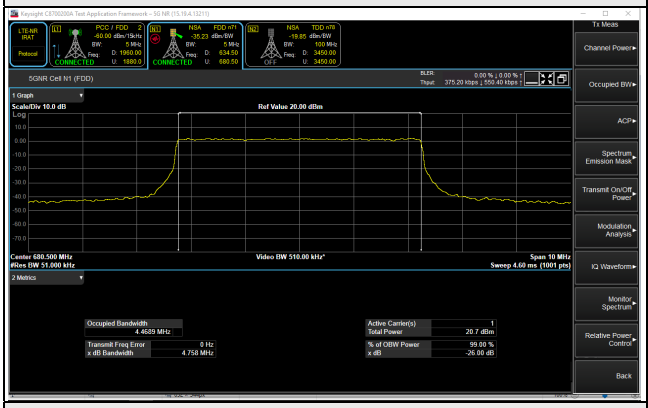
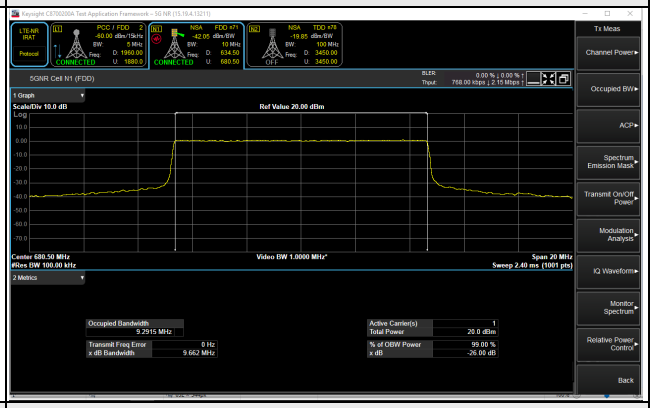
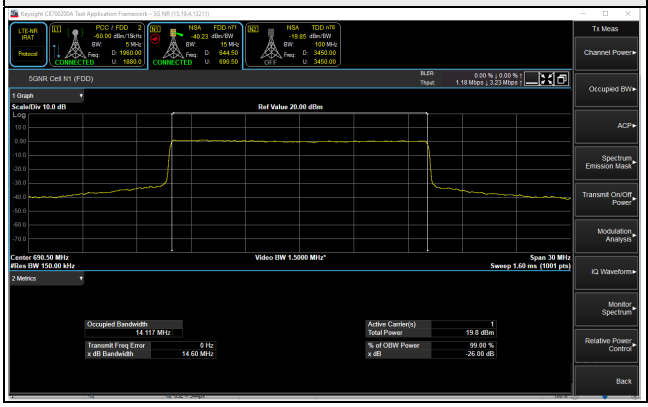
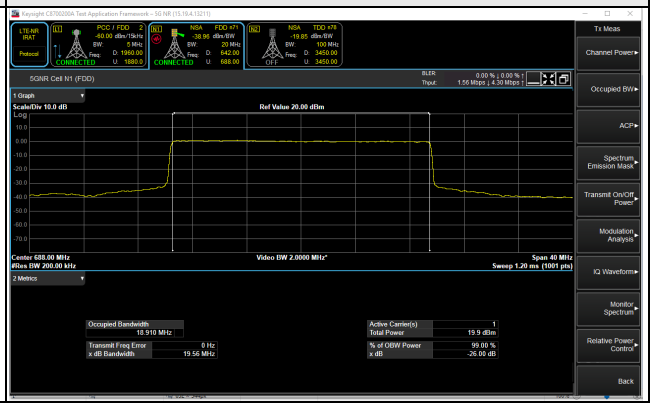


### 4.4.3 Test Result

Occupied Bandwidth

n71

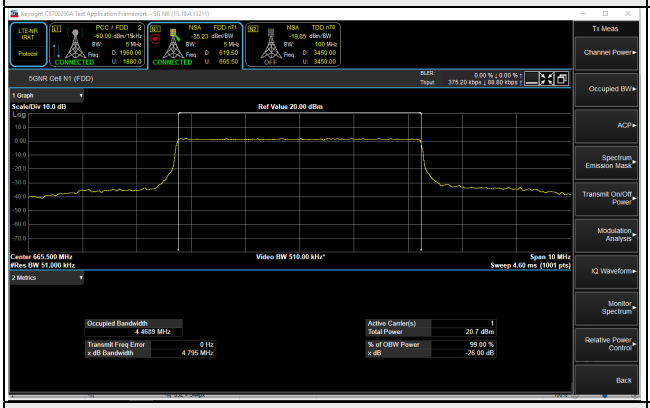
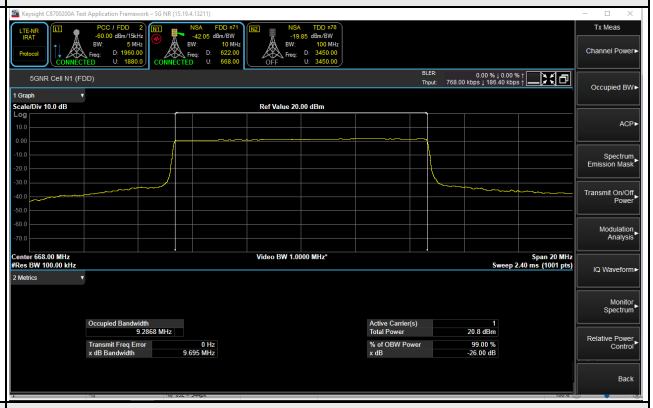
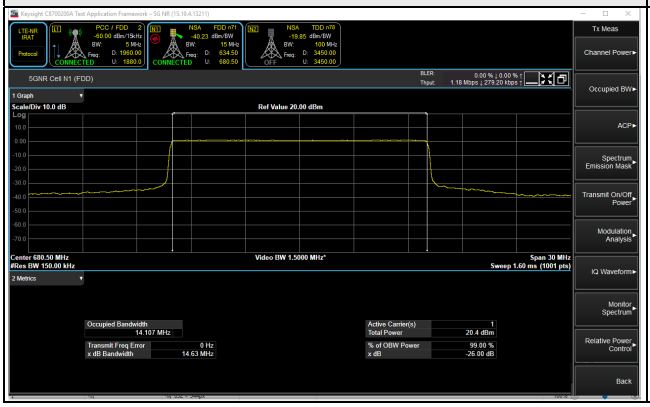
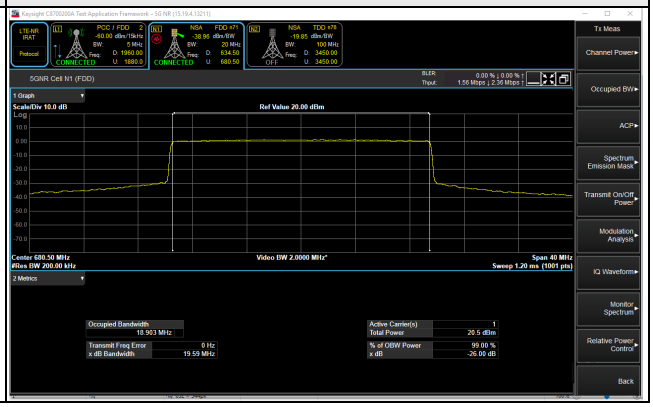
| n71, Channel Bandwidth 5MHz | | | | | | |
|---|---|---|---|---|---|---|
| Channel | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | | | | |
| | | $\pi/2$ BPSK | QPSK | 16QAM | 64QAM | 256QAM |
| 133100 | 665.5 | 4.47 | 4.47 | 4.47 | 4.47 | 4.47 |
| 136100 | 680.5 | 4.47 | 4.47 | 4.47 | 4.47 | 4.47 |
| 139100 | 695.5 | 4.47 | 4.47 | 4.47 | 4.47 | 4.47 |
| n71, Channel Bandwidth 10MHz | | | | | | |
| Channel | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | | | | |
| | | $\pi/2$ BPSK | QPSK | 16QAM | 64QAM | 256QAM |
| 133600 | 668 | 9.18 | 9.29 | 9.28 | 9.29 | 9.29 |
| 136100 | 680.5 | 9.21 | 9.29 | 9.29 | 9.29 | 9.28 |
| 138600 | 693 | 9.17 | 9.29 | 9.29 | 9.29 | 9.29 |
| n71, Channel Bandwidth 15MHz | | | | | | |
| Channel | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | | | | |
| | | $\pi/2$ BPSK | QPSK | 16QAM | 64QAM | 256QAM |
| 134100 | 670.5 | 13.93 | 14.11 | 14.10 | 14.11 | 14.11 |
| 136100 | 680.5 | 13.99 | 14.11 | 14.10 | 14.11 | 14.11 |
| 138100 | 690.5 | 14.05 | 14.12 | 14.11 | 14.12 | 14.12 |
| n71, Channel Bandwidth 20MHz | | | | | | |
| Channel | Frequency (MHz) | 99% Occupied Bandwidth (MHz) | | | | |
| | | $\pi/2$ BPSK | QPSK | 16QAM | 64QAM | 256QAM |
| 134600 | 673 | 18.65 | 18.90 | 18.90 | 18.90 | 18.90 |
| 136100 | 680.5 | 18.73 | 18.90 | 18.90 | 18.91 | 18.91 |
| 137600 | 688 | 18.81 | 18.91 | 18.91 | 18.91 | 18.91 |

| Spectrum Plot of Worst Value | |
|---|---|
| 5MHz / 16QAM | 10MHz / 64QAM |
|  |  |
| 15MHz / 64QAM | 20MHz / 64QAM |
|  |  |

## 26dB Bandwidth

n71

| n71, Channel Bandwidth 5MHz | | | | | | |
|---|---|---|---|---|---|---|
| Channel | Frequency (MHz) | 26dB Bandwidth (MHz) | | | | |
| | | $\pi/2$ BPSK | QPSK | 16QAM | 64QAM | 256QAM |
| 133100 | 665.5 | 4.76 | 4.80 | 4.75 | 4.75 | 4.73 |
| 136100 | 680.5 | 4.75 | 4.79 | 4.76 | 4.73 | 4.71 |
| 139100 | 695.5 | 4.77 | 4.77 | 4.73 | 4.72 | 4.70 |
| n71, Channel Bandwidth 10MHz | | | | | | |
| Channel | Frequency (MHz) | 26dB Bandwidth (MHz) | | | | |
| | | $\pi/2$ BPSK | QPSK | 16QAM | 64QAM | 256QAM |
| 133600 | 668 | 9.28 | 9.70 | 9.63 | 9.64 | 9.65 |
| 136100 | 680.5 | 9.30 | 9.69 | 9.68 | 9.66 | 9.64 |
| 138600 | 693 | 9.30 | 9.67 | 9.65 | 9.66 | 9.65 |
| n71, Channel Bandwidth 15MHz | | | | | | |
| Channel | Frequency (MHz) | 26dB Bandwidth (MHz) | | | | |
| | | $\pi/2$ BPSK | QPSK | 16QAM | 64QAM | 256QAM |
| 134100 | 670.5 | 13.89 | 14.62 | 14.62 | 14.60 | 14.58 |
| 136100 | 680.5 | 13.90 | 14.63 | 14.61 | 14.63 | 14.61 |
| 138100 | 690.5 | 13.89 | 14.61 | 14.62 | 14.60 | 14.58 |
| n71, Channel Bandwidth 20MHz | | | | | | |
| Channel | Frequency (MHz) | 26dB Bandwidth (MHz) | | | | |
| | | $\pi/2$ BPSK | QPSK | 16QAM | 64QAM | 256QAM |
| 134600 | 673 | 18.48 | 19.58 | 19.58 | 19.56 | 19.55 |
| 136100 | 680.5 | 18.47 | 19.58 | 19.59 | 19.57 | 19.56 |
| 137600 | 688 | 18.49 | 19.58 | 19.58 | 19.56 | 19.56 |

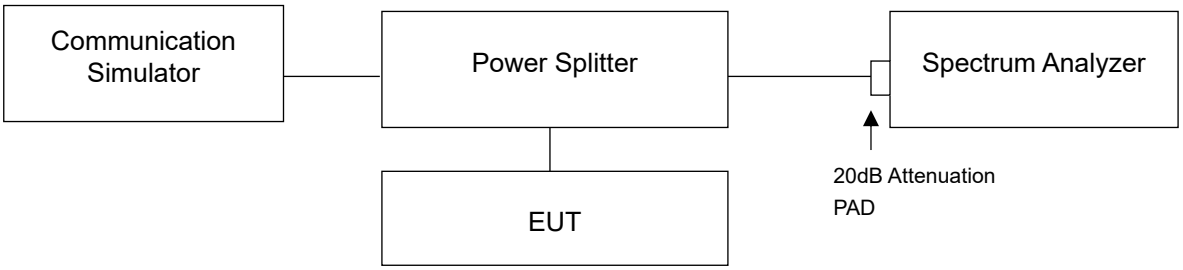
| Spectrum Plot of Worst Value | |
|---|---|
| 5MHz / QPSK | 10MHz / QPSK |
|  |  |
| 15MHz / QPSK | 20MHz / 16QAM |
|  |  |

## 4.5 Band Edge Measurement

### 4.5.1 Limits of Band Edge Measurement

According to FCC 27.53(g) for operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least 43 + 10 log (P) dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater.

### 4.5.2 Test Setup

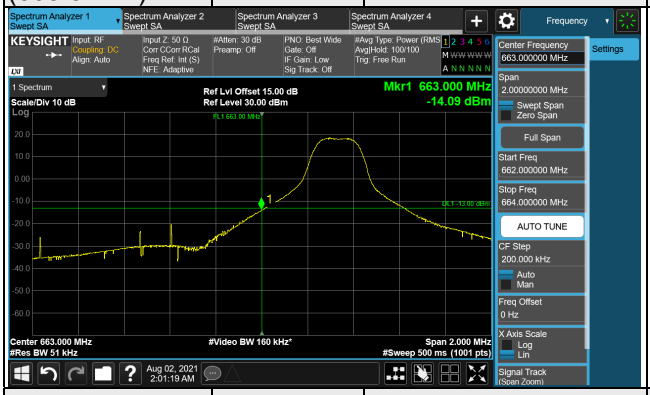


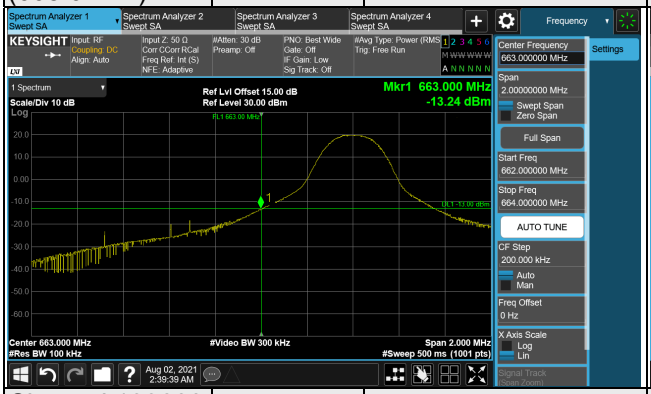
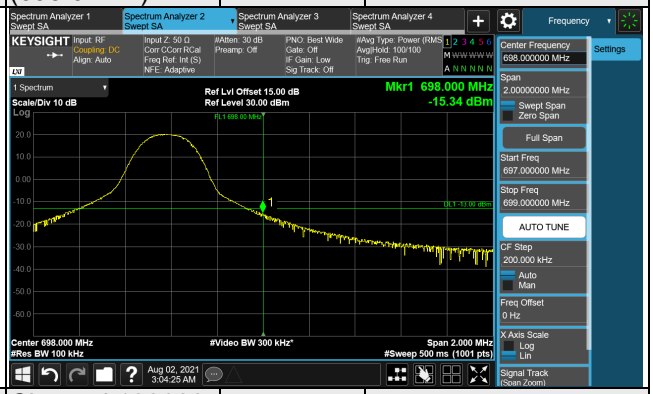
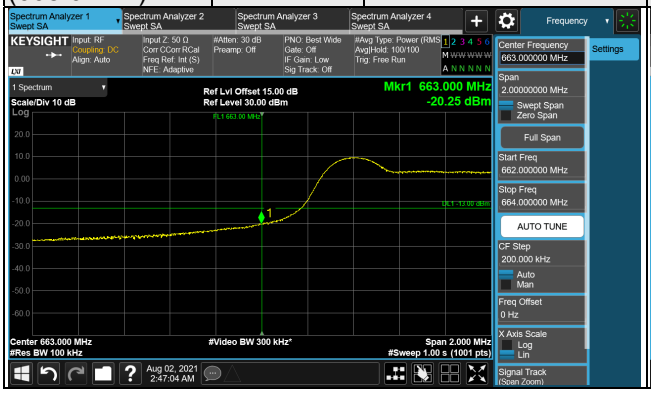
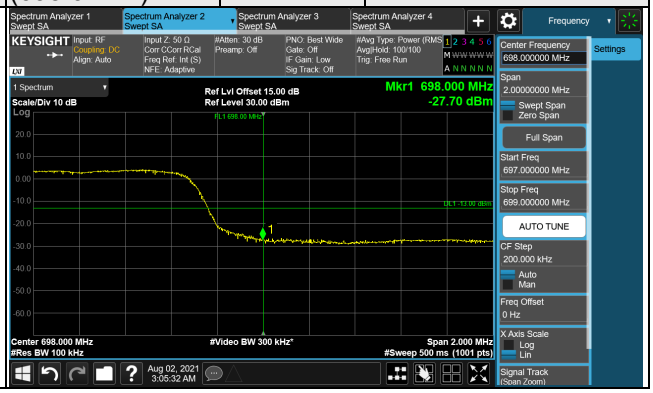

### 4.5.3 Test Procedures

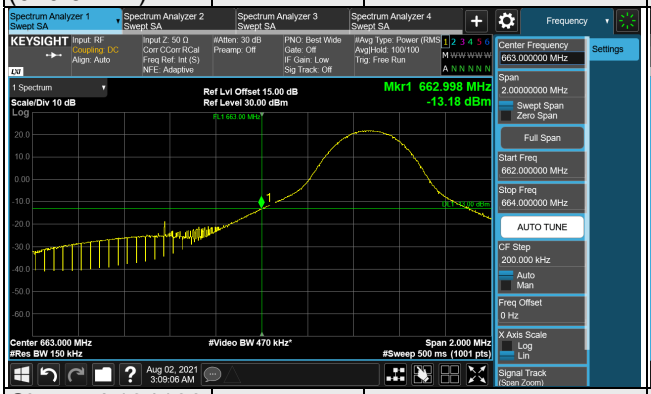
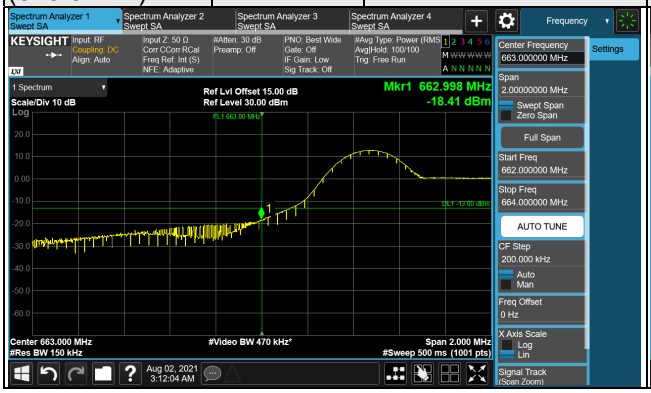
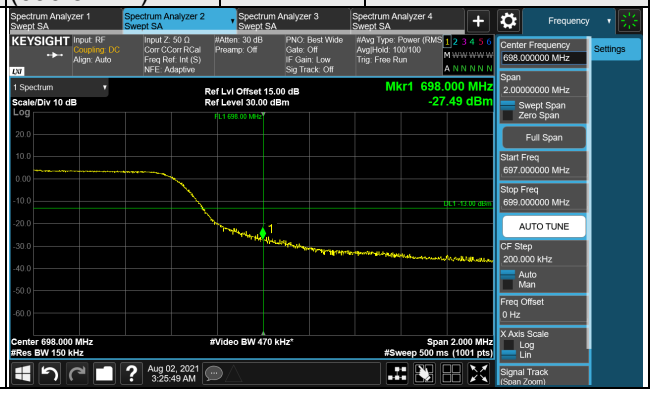
a. All measurements were done at low and high operational frequency range.
b. The center frequency of spectrum is the band edge frequency and span is 2MHz. RB of the spectrum is 51kHz and VB of the spectrum is 160kHz (Channel Bandwidth 5MHz).
c. The center frequency of spectrum is the band edge frequency and span is 2MHz. RB of the spectrum is 100kHz and VB of the spectrum is 300kHz (Channel Bandwidth 10MHz).
d. The center frequency of spectrum is the band edge frequency and span is 2MHz. RB of the spectrum is 150kHz and VB of the spectrum is 470kHz (Channel Bandwidth 15MHz).
e. The center frequency of spectrum is the band edge frequency and span is 2MHz. RB of the spectrum is 200kHz and VB of the spectrum is 620kHz (Channel Bandwidth 20MHz).
f. Record the max trace plot into the test report.

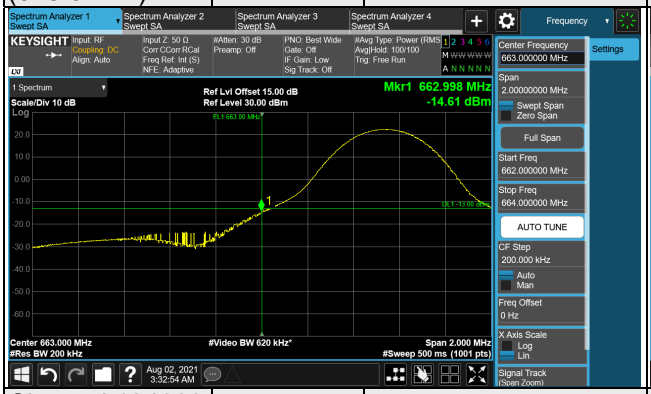
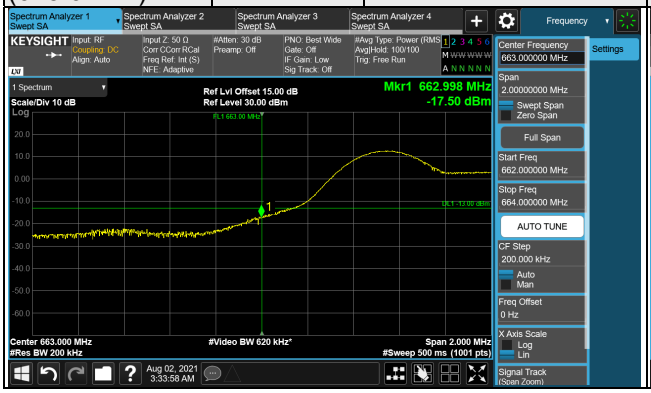
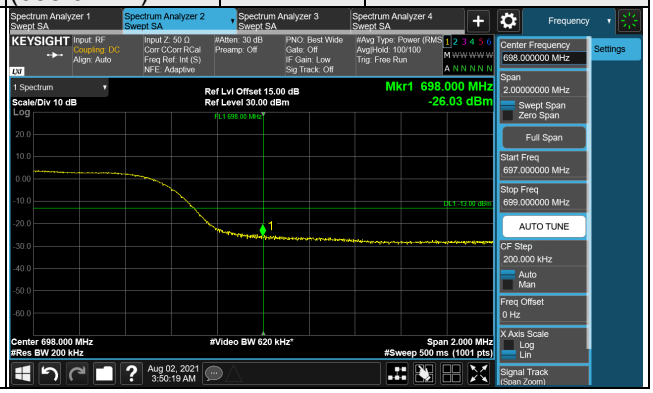
### 4.5.4 Test Results

n71
Band edge:

| Channel Bandwidth: 5MHz | | | | | |
|---|---|---|---|---|---|
| Channel 133100 (665.5MHz) | $\pi/2$ BPSK | 1 RB / 0 RB Offset | Channel 139100 (695.5MHz) | $\pi/2$ BPSK | 1 RB / 23 RB Offset |
|  | | |  | | |
| Channel 133100 (665.5MHz) | $\pi/2$ BPSK | 25 RB / 0 RB Offset | Channel 139100 (695.5MHz) | $\pi/2$ BPSK | 25 RB / 0 RB Offset |
|  | | |  | | |

| Channel Bandwidth: 10MHz | | | | | |
|---|---|---|---|---|---|
| Channel 133600 (668.0MHz) | $\pi/2$ BPSK | 1 RB / 0 RB Offset | Channel 138600 (693.0MHz) | $\pi/2$ BPSK | 1 RB / 50 RB Offset |
|  | | |  | | |
| Channel 133600 (668.0MHz) | $\pi/2$ BPSK | 50 RB / 0 RB Offset | Channel 138600 (693.0MHz) | $\pi/2$ BPSK | 50 RB / 0 RB Offset |
|  | | |  | | |

| Channel Bandwidth: 15MHz | | | | | |
|---|---|---|---|---|---|
| Channel 134100 (670.5MHz) | $\pi/2$ BPSK | 1 RB / 0 RB Offset | Channel 138100 (690.5MHz) | $\pi/2$ BPSK | 1 RB / 77 RB Offset |
|  | | |  | | |
| Channel 134100 (670.5MHz) | $\pi/2$ BPSK | 75 RB / 0 RB Offset | Channel 138100 (690.5MHz) | $\pi/2$ BPSK | 75 RB / 0 RB Offset |
|  | | |  | | |

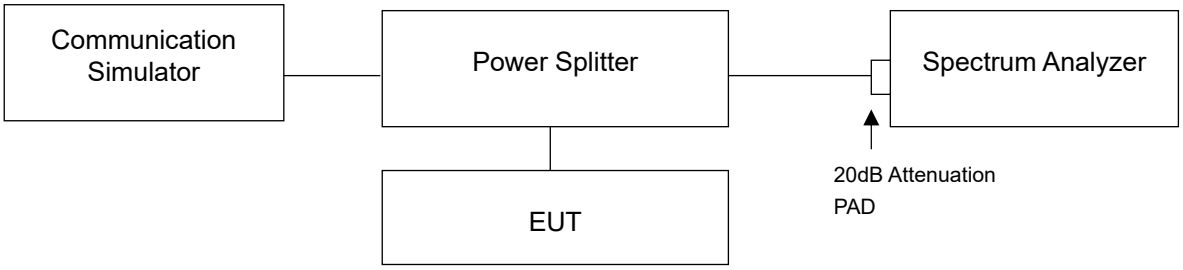
| Channel Bandwidth: 20MHz | | | | | |
|---|---|---|---|---|---|
| Channel 134600 (673.0MHz) | $\pi/2$ BPSK | 1 RB / 0 RB Offset | Channel 137600 (688.0MHz) | $\pi/2$ BPSK | 1 RB / 104 RB Offset |
|  | | |  | | |
| Channel 134600 (673.0MHz) | $\pi/2$ BPSK | 100 RB / 0 RB Offset | Channel 137600 (688.0MHz) | $\pi/2$ BPSK | 100 RB / 0 RB Offset |
|  | | |  | | |

## 4.6 Peak to Average Ratio

### 4.6.1 Limits of Peak to Average Ratio Measurement

In measuring transmissions in this band using an average power technique, the peak to-average ratio (PAR) of the transmission may not exceed 13 dB

### 4.6.2 Test Setup



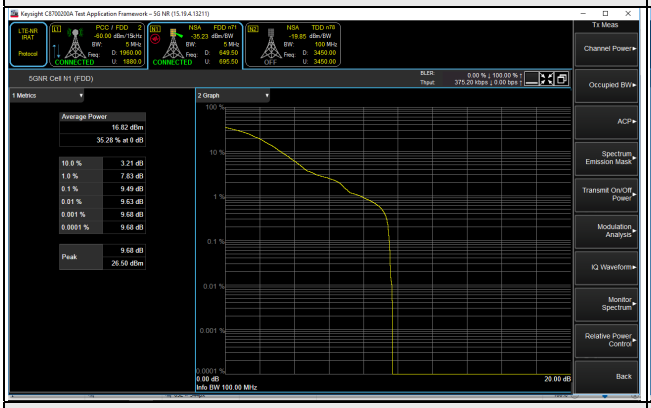
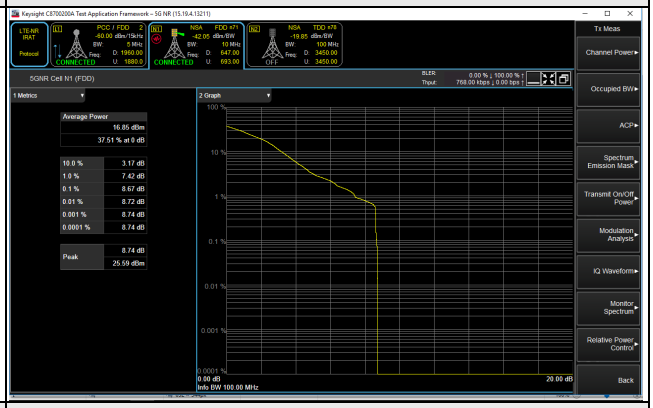
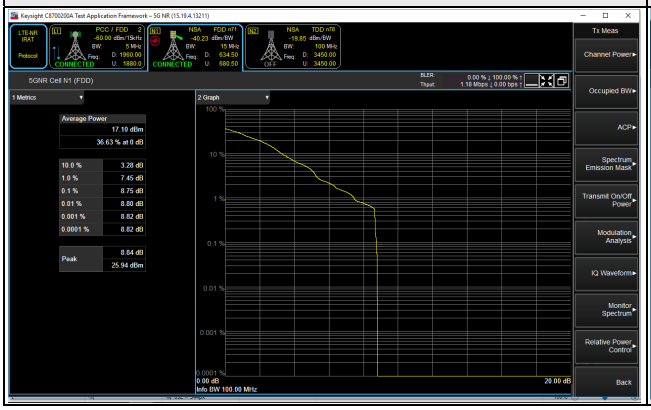
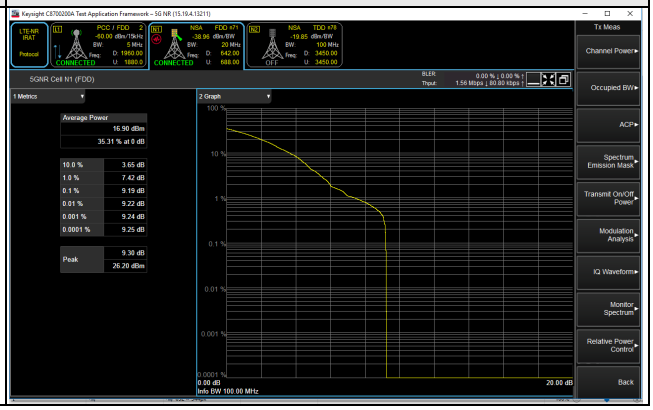

### 4.6.3 Test Procedures

a. Set resolution/measurement bandwidth ≥ signal's occupied bandwidth;
b. Set the number of counts to a value that stabilizes the measured CCDF curve;
c. Record the maximum PAPR level associated with a probability of 0.1%.

### 4.6.4 Test Results

n71

| n71, Channel Bandwidth 5MHz | | | | | | |
|---|---|---|---|---|---|---|
| Channel | Frequency (MHz) | Peak To Average Ratio (dB) | | | | |
| | | $\pi/2$ BPSK | QPSK | 16QAM | 64QAM | 256QAM |
| 133100 | 665.5 | 3.34 | 6.50 | 6.14 | 6.71 | 8.20 |
| 136100 | 680.5 | 3.37 | 6.42 | 6.06 | 6.66 | 9.04 |
| 139100 | 695.5 | 3.37 | 6.60 | 6.18 | 6.56 | 9.49 |
| n71, Channel Bandwidth 10MHz | | | | | | |
| Channel | Frequency (MHz) | Peak To Average Ratio (dB) | | | | |
| | | $\pi/2$ BPSK | QPSK | 16QAM | 64QAM | 256QAM |
| 133600 | 668 | 3.35 | 5.83 | 5.86 | 6.45 | 8.41 |
| 136100 | 680.5 | 3.38 | 5.70 | 6.10 | 6.69 | 7.58 |
| 138600 | 693 | 3.35 | 5.80 | 6.78 | 6.79 | 8.67 |
| n71, Channel Bandwidth 15MHz | | | | | | |
| Channel | Frequency (MHz) | Peak To Average Ratio (dB) | | | | |
| | | $\pi/2$ BPSK | QPSK | 16QAM | 64QAM | 256QAM |
| 134100 | 670.5 | 3.26 | 5.55 | 6.21 | 6.93 | 8.53 |
| 136100 | 680.5 | 3.43 | 5.82 | 6.40 | 7.01 | 8.75 |
| 138100 | 690.5 | 3.33 | 5.56 | 6.09 | 6.51 | 7.89 |
| n71, Channel Bandwidth 20MHz | | | | | | |
| Channel | Frequency (MHz) | Peak To Average Ratio (dB) | | | | |
| | | $\pi/2$ BPSK | QPSK | 16QAM | 64QAM | 256QAM |
| 134600 | 673 | 3.29 | 5.73 | 6.04 | 6.71 | 8.78 |
| 136100 | 680.5 | 3.31 | 5.55 | 5.92 | 6.45 | 8.07 |
| 137600 | 688 | 3.53 | 6.06 | 6.39 | 6.81 | 9.19 |

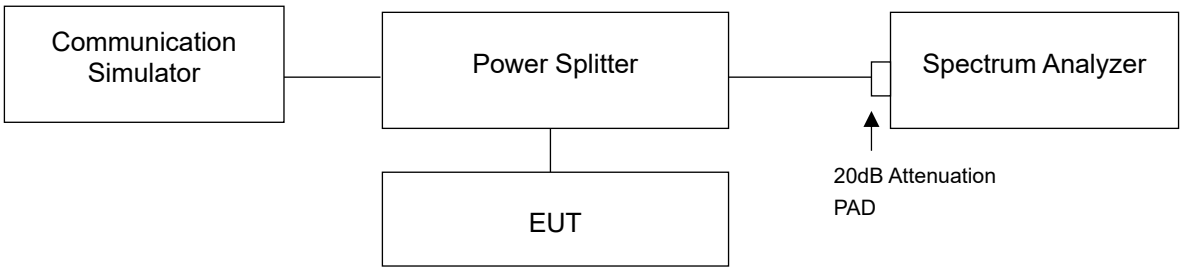
| Spectrum Plot of Worst Value | |
|---|---|
| 5MHz / 256QAM | 10MHz / 256QAM |
|  |  |
| 15MHz / 256QAM | 20MHz / 256QAM |
|  |  |

## 4.7 Conducted Spurious Emissions

### 4.7.1 Limits of Conducted Spurious Emissions Measurement

According to FCC 27.53(g) for operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least 43 + 10 log (P) dB.
Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater.

### 4.7.2 Test Setup

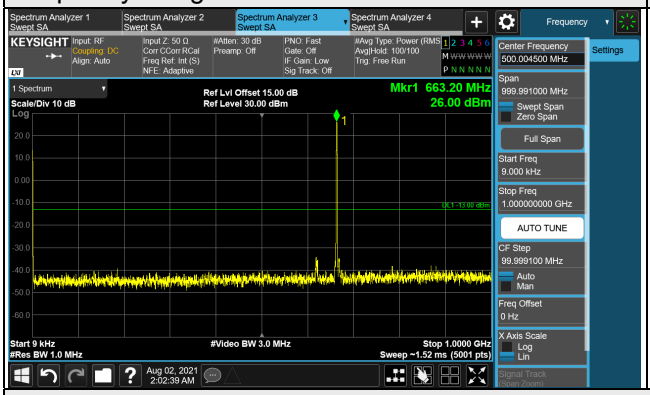
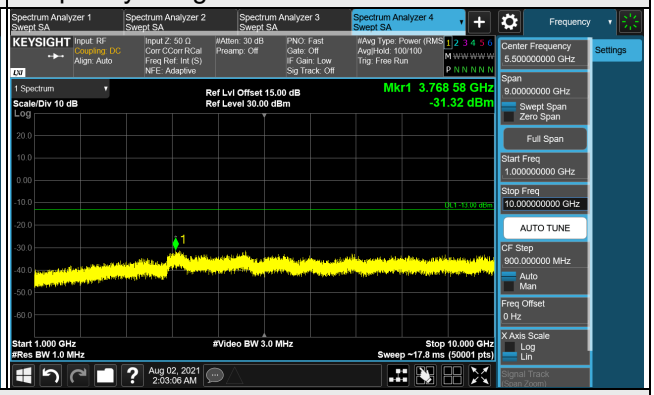
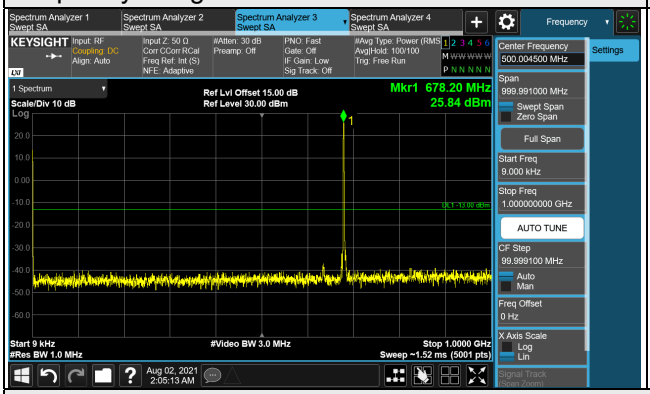
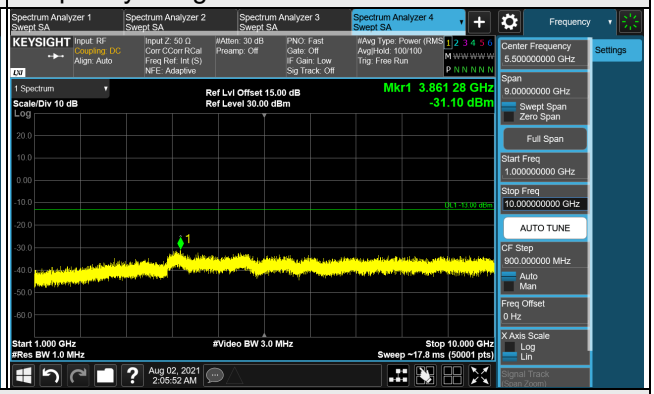
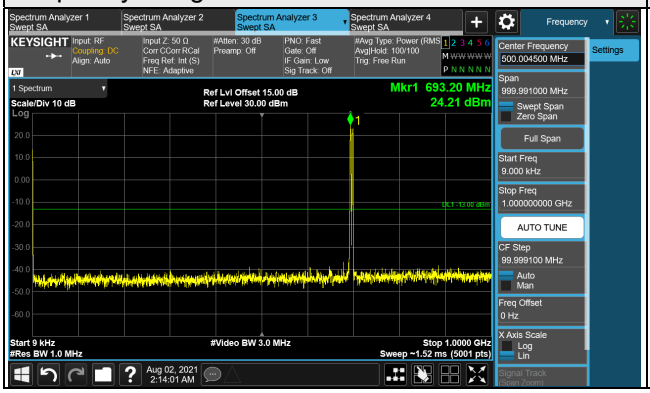
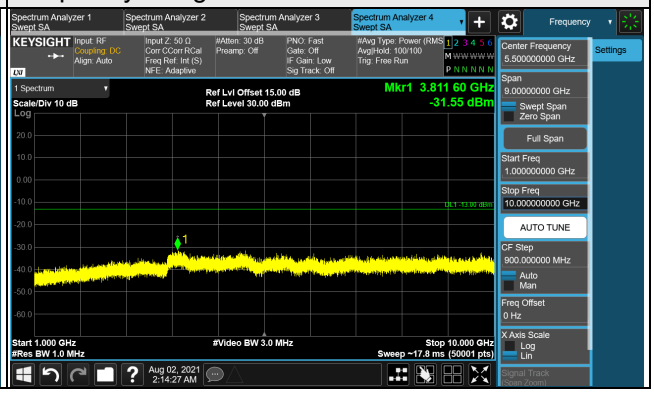



### 4.7.3 Test Procedure

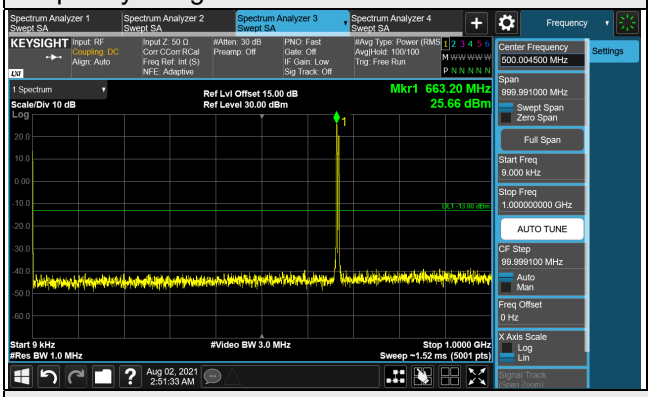
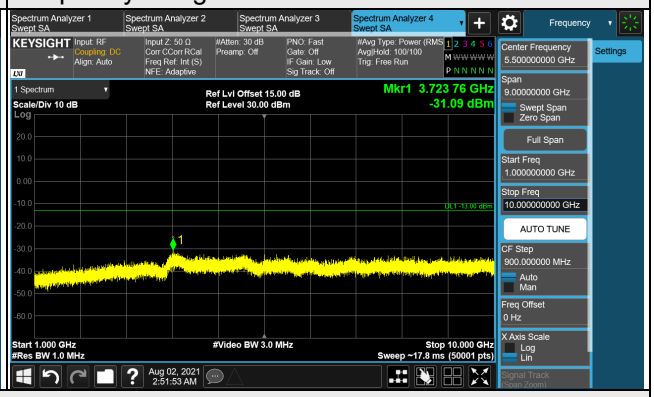
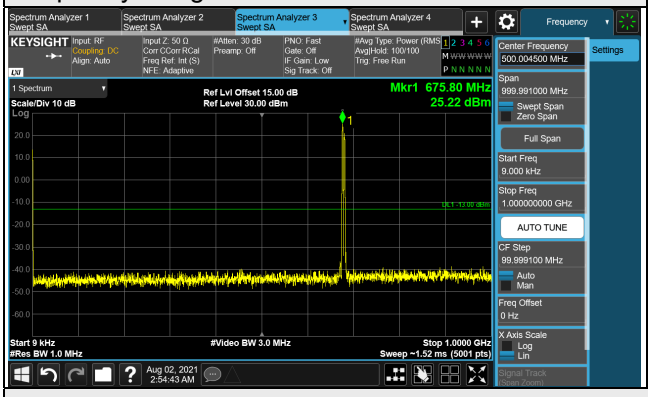
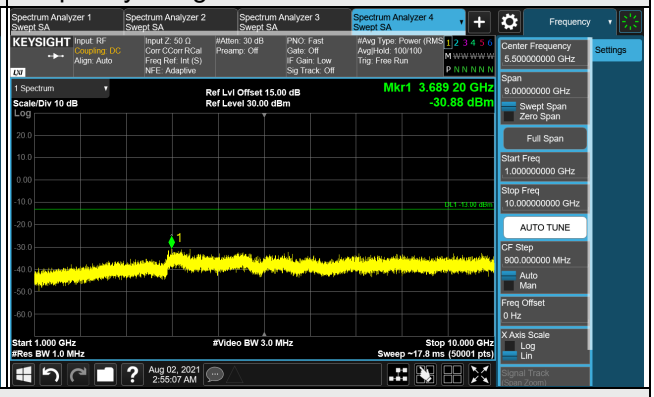
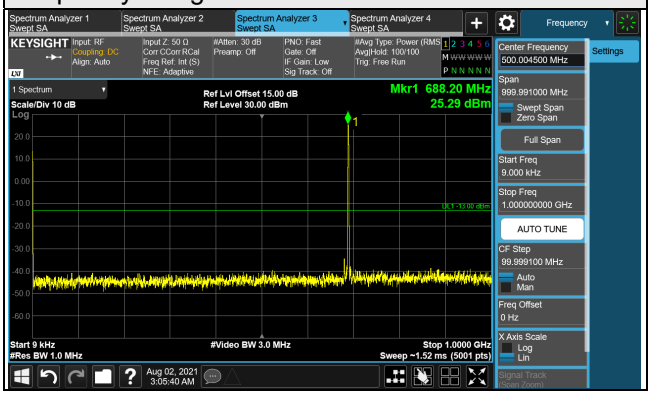
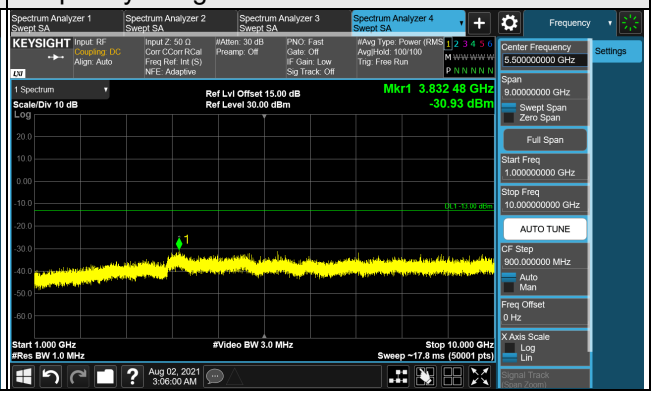
a. The EUT makes a phone call to the communication simulator. All measurements were done at low, middle and high operational frequency range.
b. Measuring frequency range is from 9kHz to 10GHz. 20dB attenuation pad is connected with spectrum. RBW=1MHz and VBW=3MHz is used for conducted emission measurement.

### 4.7.4 Test Results

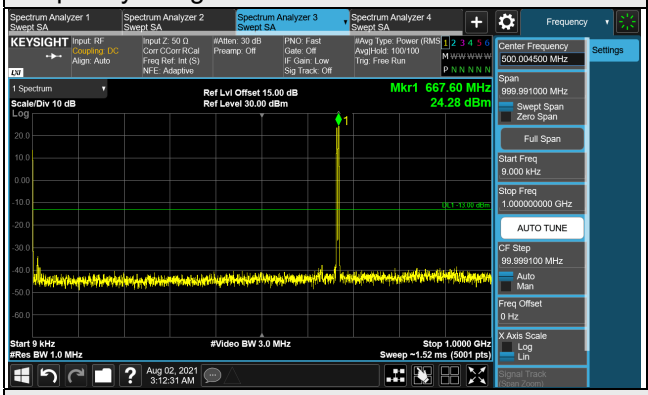
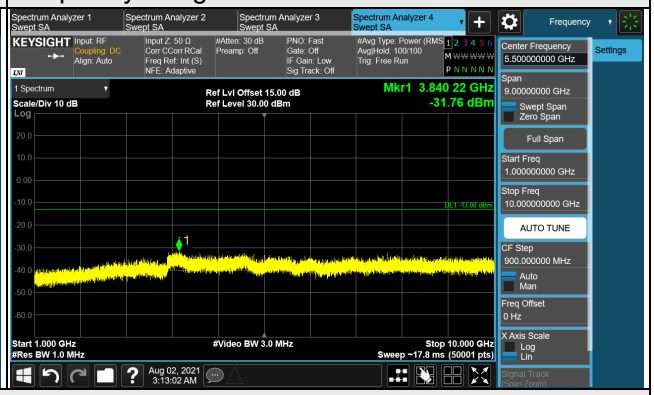
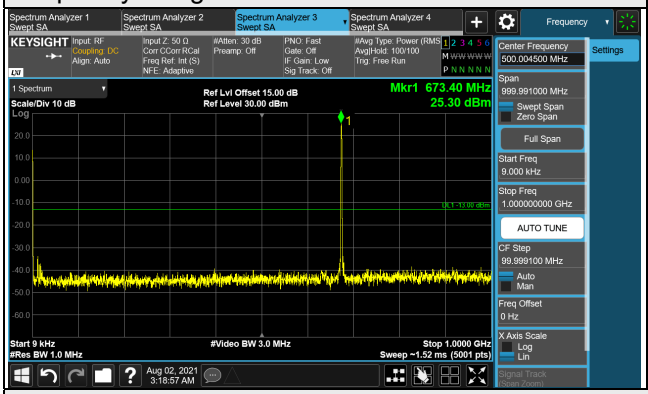
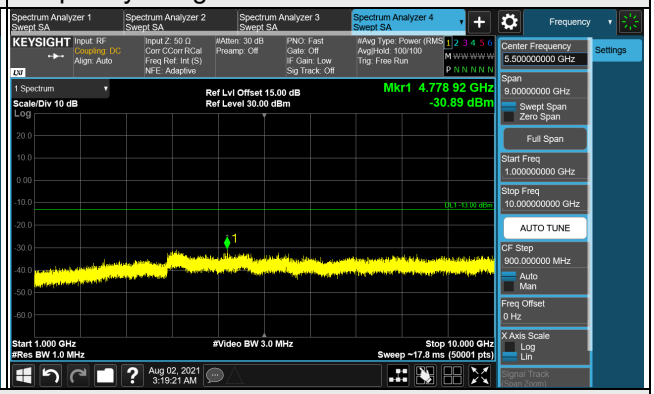
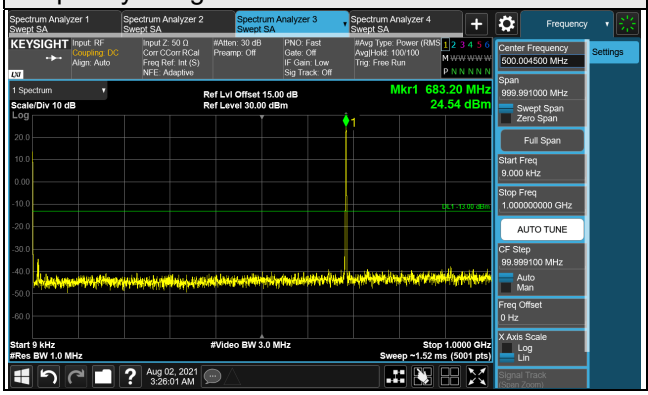
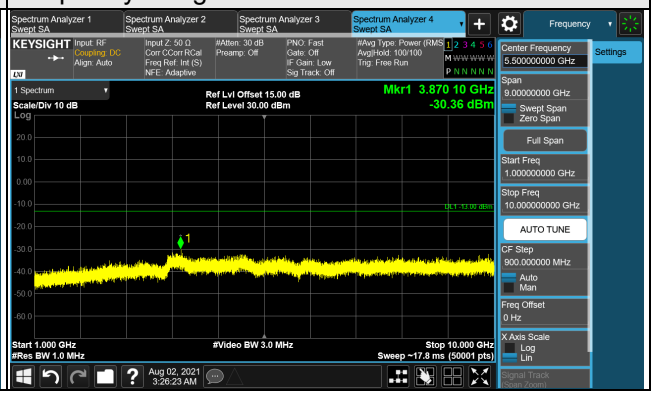
n71

| Channel Bandwidth: 5MHz | |
|---|---|
| Channel 133100 (665.5MHz) | |
| Frequency Range : 9kHz~1GHz | Frequency Range : 1GHz~10GHz |
|  |  |
| Channel 136100 (680.5MHz) | |
| Frequency Range : 9kHz~1GHz | Frequency Range : 1GHz~10GHz |
|  |  |
| Channel 139100 (695.5MHz) | |
| Frequency Range : 9kHz~1GHz | Frequency Range : 1GHz~10GHz |
|  |  |

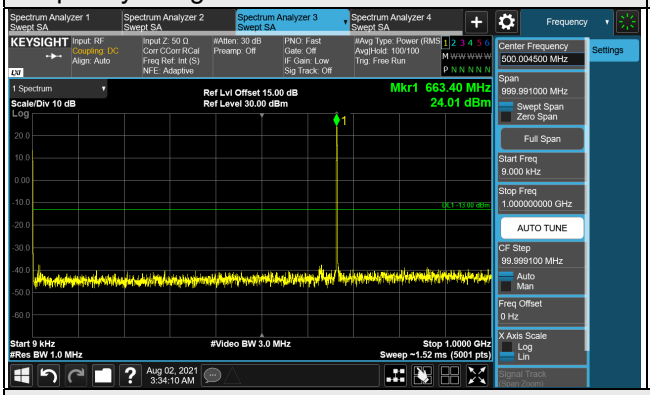
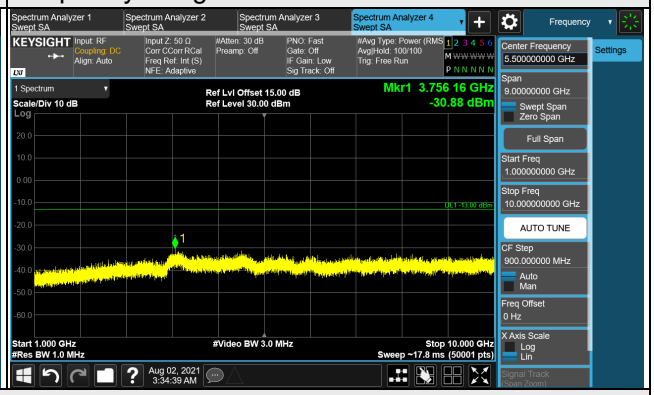
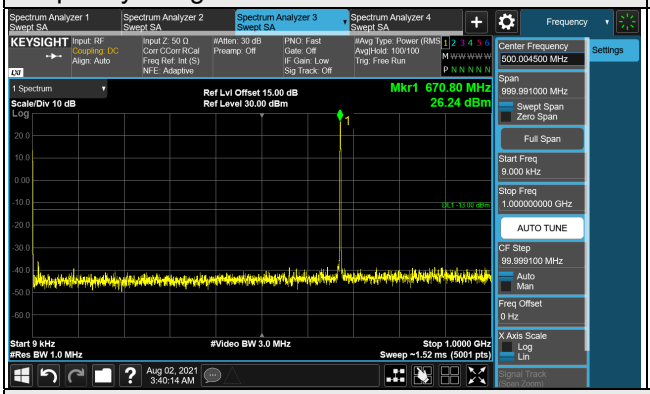
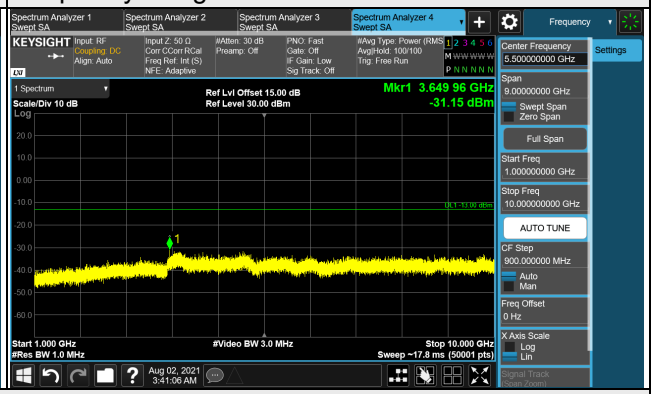
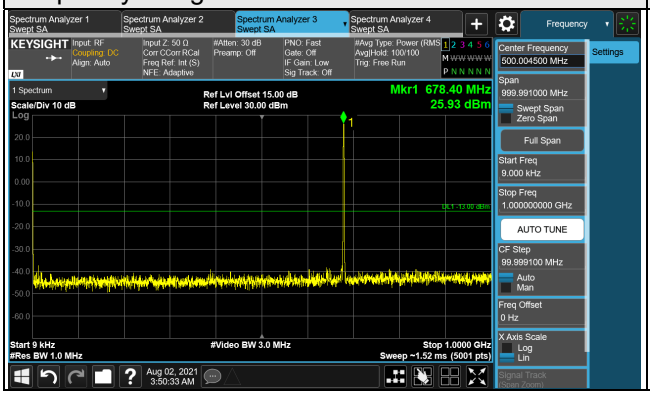
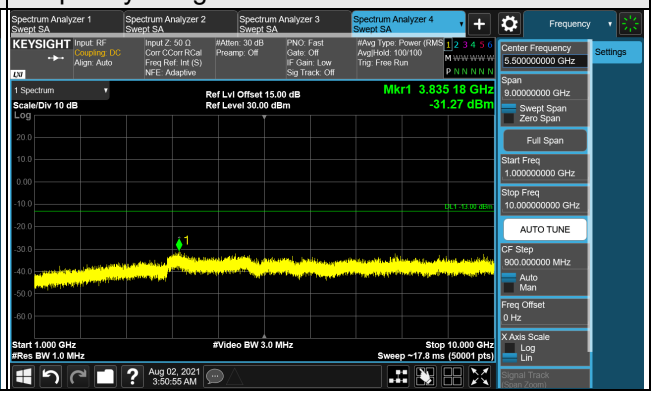
*The 9 kHz tone is from the spectrum analyzer.

| Channel Bandwidth: 10MHz | |
|---|---|
| Channel 133600 (668.0MHz) | |
| Frequency Range : 9kHz~1GHz | Frequency Range : 1GHz~10GHz |
|  |  |
| Channel 136100 (680.5MHz) | |
| Frequency Range : 9kHz~1GHz | Frequency Range : 1GHz~10GHz |
|  |  |
| Channel 138600 (693.0MHz) | |
| Frequency Range : 9kHz~1GHz | Frequency Range : 1GHz~10GHz |
|  |  |

*The 9 kHz tone is from the spectrum analyzer.

| Channel Bandwidth: 15MHz | |
|---|---|
| Channel 134100 (670.5MHz) | |
| Frequency Range : 9kHz~1GHz | Frequency Range : 1GHz~10GHz |
|  |  |
| Channel 136100 (680.5MHz) | |
| Frequency Range : 9kHz~1GHz | Frequency Range : 1GHz~10GHz |
|  |  |
| Channel 138100 (690.5MHz) | |
| Frequency Range : 9kHz~1GHz | Frequency Range : 1GHz~10GHz |
|  |  |

*The 9 kHz tone is from the spectrum analyzer.

| Channel Bandwidth: 20MHz | |
|---|---|
| Channel 134600 (673.0MHz) | |
| Frequency Range : 9kHz~1GHz | Frequency Range : 1GHz~10GHz |
|  |  |
| Channel 136100 (680.5MHz) | |
| Frequency Range : 9kHz~1GHz | Frequency Range : 1GHz~10GHz |
|  |  |
| Channel 137600 (688.0MHz) | |
| Frequency Range : 9kHz~1GHz | Frequency Range : 1GHz~10GHz |
|  |  |

*The 9 kHz tone is from the spectrum analyzer.

## 4.8 Radiated Emission Measurement

### 4.8.1 Limits of Radiated Emission Measurement

According to FCC 27.53(l) for mobile operations in the 3700-3980 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed −13 dBm/MHz. Compliance with this paragraph (l)(2) is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be either one percent of the emission bandwidth of the fundamental emission of the transmitter or 350 kHz. In the bands between 1 and 5 MHz removed from the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be 500 kHz. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

For n71:
According to FCC 27.53(g) for operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least 43 + 10 log (P) dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater.

For LTE Band 2:
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB. The emission limit equal to –13dBm.

For LTE Band 66:
According to FCC 27.53(h) for operations in the 1695-1710MHz, 1710-1755MHz, 1755-1780 MHz, 1915-1920MHz, 1995-2000 MHz, 2000-2020MHz, 2110-2155MHz, 2155-2180 MHz, and 2180-2200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least 43 + 10 log (P) dB.

### 4.8.2 Test Procedure

a. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m(below or equal 1GHz) and/or 1.5m(above 1GHz) height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The “Read Value” is the spectrum reading the maximum power value.

b. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

c. Perform a field strength measurement and record the worse read value, is the field strength value via a spectrum reading obtained corrected for antenna factor, cable loss and pre-amplifier factor and then mathematically convert the measured field strength level to EIRP/ERP level.

d. Following C63.26 section 5.5 and 5.2.7
   - EIRP (dBm) = E (dBμV/m) + 20log(D) - 104.8; where D is the measurement distance (in the far field region) in m.
   - ERP (dBm) = E (dBμV/m) + 20log(D) - 104.8 - 2.15; where D is the measurement distance (in the far field region) in m.

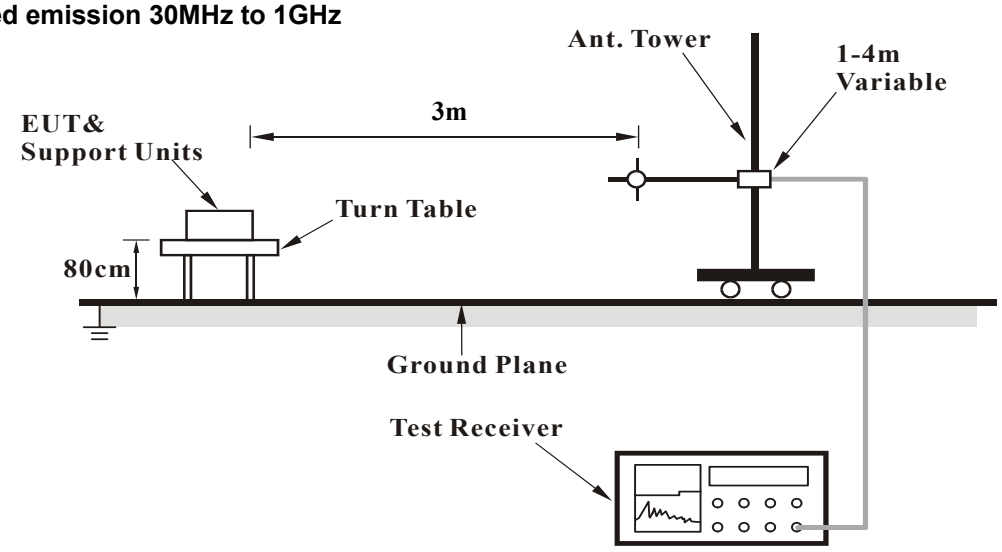
Note:
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.
2. The emission levels were against the limit of frequency range 9 kHz ~ 30 MHz:
   The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

### 4.8.3 Deviation from Test Standard

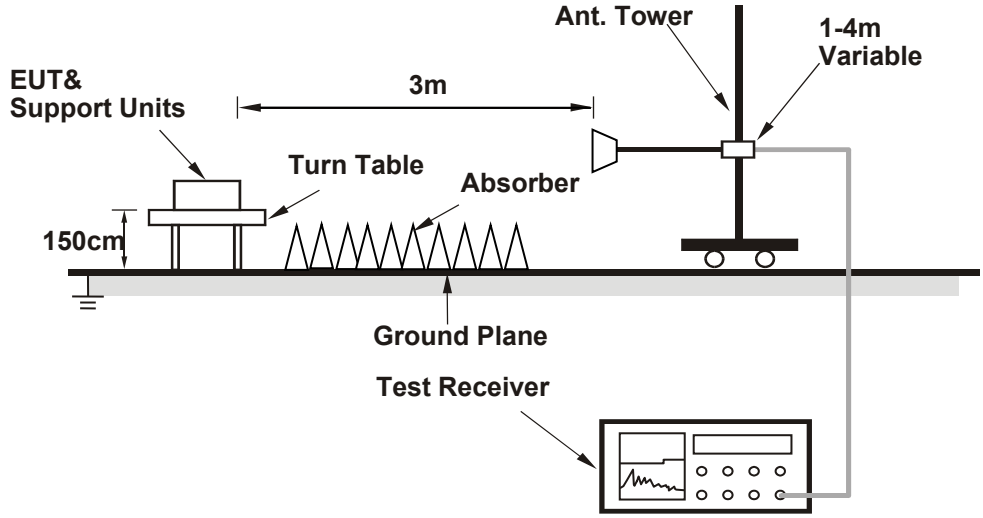
No deviation.

### 4.8.4 Test Setup

**For radiated emission 30MHz to 1GHz**




**For radiated emission above 1GHz**




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

### 4.8.5 Test Results

Below 1GHz

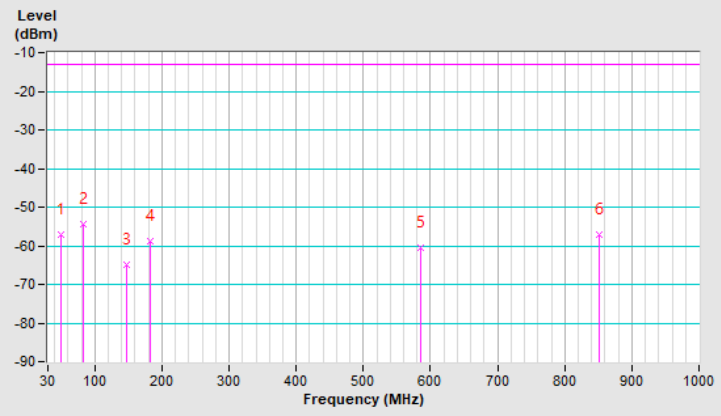
n71, Channel Bandwidth: 5MHz

| Mode | TX channel 136100 (680.5MHz) | Frequency Range | Below 1000 MHz |
|---|---|---|---|
| Environmental Conditions | 22deg. C, 66%RH | Input Power | 120Vac, 60Hz |
| Tested By | Greg Lin | | |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | ERP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 50.37 | -56.96 | -13.00 | -43.96 | 1.50 H | 93 | 49.34 | -106.30 |
| 2 | 82.38 | -54.52 | -13.00 | -41.52 | 1.00 H | 19 | 56.82 | -111.34 |
| 3 | 147.37 | -64.84 | -13.00 | -51.84 | 1.00 H | 232 | 41.25 | -106.09 |
| 4 | 182.29 | -58.68 | -13.00 | -45.68 | 1.25 H | 232 | 49.06 | -107.74 |
| 5 | 584.84 | -60.35 | -13.00 | -47.35 | 1.00 H | 40 | 37.64 | -97.99 |
| 6 | 850.62 | -57.07 | -13.00 | -44.07 | 1.00 H | 9 | 35.97 | -93.04 |

Remarks:

1. ERP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8 - 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

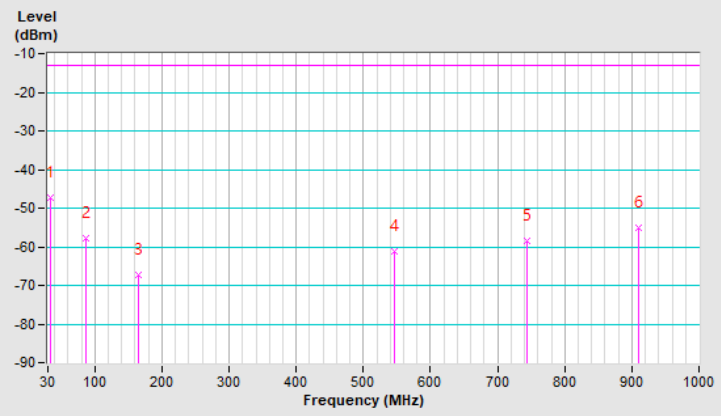


| Mode | TX channel 136100 (680.5MHz) | Frequency Range | Below 1000 MHz |
|---|---|---|---|
| Environmental Conditions | 22deg. C, 66%RH | Input Power | 120Vac, 60Hz |
| Tested By | Greg Lin | | |

| Antenna Polarity & Test Distance : Vertical at 3m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | ERP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 33.88 | -47.22 | -13.00 | -34.22 | 1.00 V | 219 | 60.23 | -107.45 |
| 2 | 86.26 | -57.96 | -13.00 | -44.96 | 1.25 V | 291 | 53.98 | -111.94 |
| 3 | 165.80 | -67.22 | -13.00 | -54.22 | 1.00 V | 232 | 38.90 | -106.12 |
| 4 | 547.01 | -61.22 | -13.00 | -48.22 | 1.00 V | 175 | 37.72 | -98.94 |
| 5 | 743.92 | -58.36 | -13.00 | -45.36 | 1.00 V | 137 | 36.90 | -95.26 |
| 6 | 909.79 | -55.12 | -13.00 | -42.12 | 1.50 V | 5 | 36.39 | -91.51 |

Remarks:

1. ERP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8 - 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.



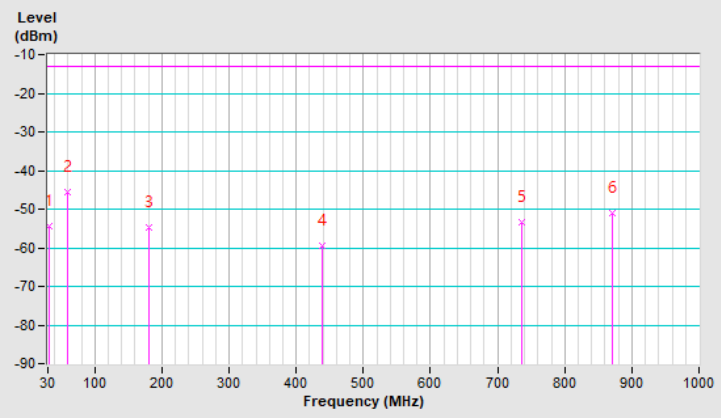
LTE Band 2, Channel Bandwidth: 1.4MHz

| Mode | TX channel 18900 (1880.00MHz) | Frequency Range | Below 1000 MHz |
|---|---|---|---|
| Environmental Conditions | 22deg. C, 66%RH | Input Power | 120Vac, 60Hz |
| Tested By | Greg Lin | | |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 31.94 | -54.46 | -13.00 | -41.46 | 1.00 H | 9 | 51.04 | -105.50 |
| **2** | **60.07** | **-45.43** | **-13.00** | **-32.43** | **1.25 H** | **179** | **59.26** | **-104.69** |
| 3 | 181.32 | -54.91 | -13.00 | -41.91 | 1.25 H | 255 | 50.57 | -105.48 |
| 4 | 438.37 | -59.51 | -13.00 | -46.51 | 1.00 H | 58 | 39.21 | -98.72 |
| 5 | 736.16 | -53.53 | -13.00 | -40.53 | 1.50 H | 156 | 39.78 | -93.31 |
| 6 | 870.02 | -50.85 | -13.00 | -37.85 | 1.00 H | 87 | 39.66 | -90.51 |

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

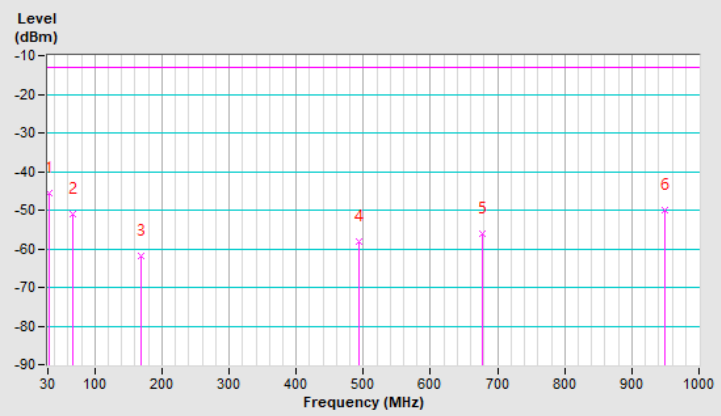


| Mode | TX channel 18900 (1880.00MHz) | Frequency Range | Below 1000 MHz |
|---|---|---|---|
| Environmental Conditions | 22deg. C, 66%RH | Input Power | 120Vac, 60Hz |
| Tested By | Greg Lin | | |

| Antenna Polarity & Test Distance : Vertical at 3m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 31.94 | -45.55 | -13.00 | -32.55 | 1.25 V | 58 | 59.95 | -105.50 |
| 2 | 67.83 | -50.97 | -13.00 | -37.97 | 1.00 V | 335 | 54.72 | -105.69 |
| 3 | 168.71 | -61.87 | -13.00 | -48.87 | 1.25 V | 160 | 42.24 | -104.11 |
| 4 | 493.66 | -58.19 | -13.00 | -45.19 | 1.50 V | 117 | 39.51 | -97.70 |
| 5 | 676.99 | -56.22 | -13.00 | -43.22 | 1.00 V | 106 | 38.13 | -94.35 |
| 6 | 948.59 | -50.04 | -13.00 | -37.04 | 1.25 V | 94 | 38.76 | -88.80 |

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.



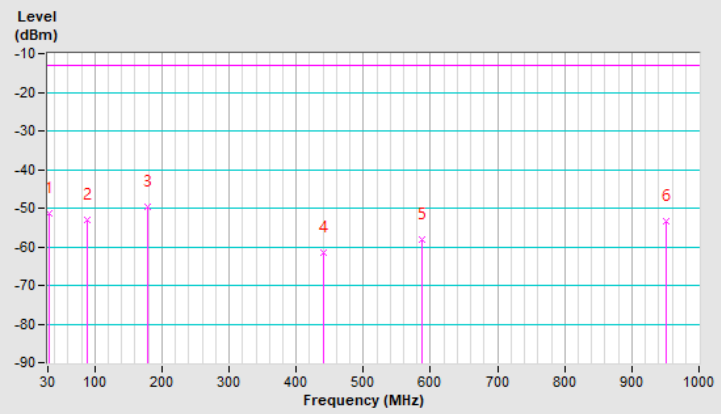
LTE Band 66, Channel Bandwidth: 1.4MHz

| Mode | TX channel 132665 (1779.3MHz) | Frequency Range | Below 1000 MHz |
|---|---|---|---|
| Environmental Conditions | 22deg. C, 66%RH | Input Power | 120Vac, 60Hz |
| Tested By | Greg Lin | | |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 32.91 | -51.38 | -13.00 | -38.38 | 1.25 H | 91 | 54.25 | -105.63 |
| 2 | 89.17 | -52.94 | -13.00 | -39.94 | 1.00 H | 207 | 56.87 | -109.81 |
| 3 | 178.41 | -49.82 | -13.00 | -36.82 | 1.25 H | 257 | 55.23 | -105.05 |
| 4 | 440.31 | -61.46 | -13.00 | -48.46 | 1.50 H | 194 | 37.21 | -98.67 |
| 5 | 586.78 | -58.16 | -13.00 | -45.16 | 1.00 H | 109 | 37.63 | -95.79 |
| 6 | 951.50 | -53.33 | -13.00 | -40.33 | 1.50 H | 226 | 35.46 | -88.79 |

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

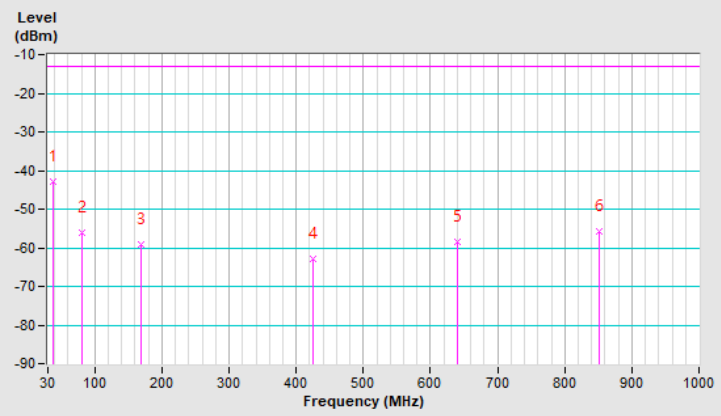


| Mode | TX channel 132665 (1779.3MHz) | Frequency Range | Below 1000 MHz |
|---|---|---|---|
| Environmental Conditions | 22deg. C, 66%RH | Input Power | 120Vac, 60Hz |
| Tested By | Greg Lin | | |

| Antenna Polarity & Test Distance : Vertical at 3m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| **1** | **37.76** | **-43.01** | **-13.00** | **-30.01** | **1.25 V** | **278** | **62.06** | **-105.07** |
| 2 | 81.41 | -55.97 | -13.00 | -42.97 | 1.50 V | 278 | 53.08 | -109.05 |
| 3 | 168.71 | -59.22 | -13.00 | -46.22 | 1.00 V | 151 | 44.89 | -104.11 |
| 4 | 425.76 | -62.83 | -13.00 | -49.83 | 1.00 V | 315 | 36.29 | -99.12 |
| 5 | 640.13 | -58.59 | -13.00 | -45.59 | 1.00 V | 11 | 36.16 | -94.75 |
| 6 | 851.59 | -55.66 | -13.00 | -42.66 | 1.25 V | 182 | 35.21 | -90.87 |

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.



Above 1GHz
n71, Channel Bandwidth: 5MHz

| Mode | TX channel 133100 (665.5MHz) | Frequency Range | 1GHz ~ 10GHz |
|---|---|---|---|
| Environmental Conditions | 22deg. C, 66%RH | Input Power | 120Vac, 60Hz |
| Tested By | Greg Lin | | |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | ERP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 1331.00 | -52.20 | -13.00 | -39.20 | 1.78 H | 47 | 49.60 | -101.80 |
| Antenna Polarity & Test Distance : Vertical at 3m | | | | | | | | |
| No | Frequency (MHz) | ERP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 1331.00 | -57.20 | -13.00 | -44.20 | 2.07 V | 126 | 44.60 | -101.80 |

Remarks:

1. ERP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8 - 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

| Mode | TX channel 136100 (680.5MHz) | Frequency Range | 1GHz ~ 10GHz |
|---|---|---|---|
| Environmental Conditions | 22deg. C, 66%RH | Input Power | 120Vac, 60Hz |
| Tested By | Greg Lin | | |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | ERP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| **1** | **1361.00** | **-52.00** | **-13.00** | **-39.00** | **1.80 H** | **48** | **49.80** | **-101.80** |
| Antenna Polarity & Test Distance : Vertical at 3m | | | | | | | | |
| No | Frequency (MHz) | ERP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 1361.00 | -57.70 | -13.00 | -44.70 | 2.05 V | 124 | 44.10 | -101.80 |

Remarks:

1. ERP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8 - 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

| | | | |
|---|---|---|---|
| Mode | TX channel 139100 (695.5MHz) | Frequency Range | 1GHz ~ 10GHz |
| Environmental Conditions | 22deg. C, 66%RH | Input Power | 120Vac, 60Hz |
| Tested By | Greg Lin | | |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | ERP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 1391.00 | -52.10 | -13.00 | -39.10 | 1.85 H | 49 | 49.60 | -101.70 |
| Antenna Polarity & Test Distance : Vertical at 3m | | | | | | | | |
| No | Frequency (MHz) | ERP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 1391.00 | -57.20 | -13.00 | -44.20 | 2.12 V | 126 | 44.50 | -101.70 |

Remarks:

1. ERP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8 - 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

n71, Channel Bandwidth: 20MHz

| Mode | TX channel 134600 (673.0MHz) | Frequency Range | 1GHz ~ 10GHz |
|---|---|---|---|
| Environmental Conditions | 22deg. C, 66%RH | Input Power | 120Vac, 60Hz |
| Tested By | Greg Lin | | |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | ERP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 1346.00 | -53.84 | -13.00 | -40.84 | 2.42 H | 204 | 47.97 | -101.81 |
| Antenna Polarity & Test Distance : Vertical at 3m | | | | | | | | |
| No | Frequency (MHz) | ERP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 1346.00 | -55.09 | -13.00 | -42.09 | 2.96 V | 101 | 46.72 | -101.81 |

Remarks:

1. ERP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8 - 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

| Mode | TX channel 136100 (680.5MHz) | Frequency Range | 1GHz ~ 10GHz |
|---|---|---|---|
| Environmental Conditions | 22deg. C, 66%RH | Input Power | 120Vac, 60Hz |
| Tested By | Greg Lin | | |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | ERP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 1361.00 | -53.49 | -13.00 | -40.49 | 2.44 H | 199 | 48.27 | -101.76 |
| Antenna Polarity & Test Distance : Vertical at 3m | | | | | | | | |
| No | Frequency (MHz) | ERP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 1361.00 | -54.95 | -13.00 | -41.95 | 2.98 V | 97 | 46.81 | -101.76 |

Remarks:

1. ERP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8 - 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

| Mode | TX channel 137600 (688.0MHz) | Frequency Range | 1GHz ~ 10GHz |
|---|---|---|---|
| Environmental Conditions | 22deg. C, 66%RH | Input Power | 120Vac, 60Hz |
| Tested By | Greg Lin | | |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | ERP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 1376.00 | -53.92 | -13.00 | -40.92 | 2.52 H | 204 | 47.78 | -101.70 |
| Antenna Polarity & Test Distance : Vertical at 3m | | | | | | | | |
| No | Frequency (MHz) | ERP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 1376.00 | -55.12 | -13.00 | -42.12 | 2.94 V | 105 | 46.58 | -101.70 |

Remarks:

1. ERP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8 - 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit.

LTE Band 2, Channel Bandwidth: 1.4MHz

| Mode | TX channel 18607 (1850.70MHz) | Frequency Range | 1GHz ~ 20GHz |
|---|---|---|---|
| Environmental Conditions | 22deg. C, 66%RH | Input Power | 120Vac, 60Hz |
| Tested By | Greg Lin | | |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 3701.40 | -48.61 | -13.00 | -35.61 | 2.52 H | 174 | 43.02 | -91.63 |
| Antenna Polarity & Test Distance : Vertical at 3m | | | | | | | | |
| No | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 3701.40 | -50.07 | -13.00 | -37.07 | 1.93 V | 233 | 41.56 | -91.63 |

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

| Mode | TX channel 18900 (1880.00MHz) | Frequency Range | 1GHz ~ 20GHz |
|---|---|---|---|
| Environmental Conditions | 22deg. C, 66%RH | Input Power | 120Vac, 60Hz |
| Tested By | Greg Lin | | |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 3760.00 | -48.09 | -13.00 | -35.09 | 2.59 H | 174 | 43.33 | -91.42 |
| Antenna Polarity & Test Distance : Vertical at 3m | | | | | | | | |
| No | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 3760.00 | -49.65 | -13.00 | -36.65 | 1.92 V | 221 | 41.77 | -91.42 |

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

| Mode | TX channel 19193 (1909.30MHz) | Frequency Range | 1GHz ~ 20GHz |
|---|---|---|---|
| Environmental Conditions | 22deg. C, 66%RH | Input Power | 120Vac, 60Hz |
| Tested By | Greg Lin | | |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 3818.60 | -48.17 | -13.00 | -35.17 | 2.57 H | 180 | 42.92 | -91.09 |
| Antenna Polarity & Test Distance : Vertical at 3m | | | | | | | | |
| No | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 3818.60 | -49.25 | -13.00 | -36.25 | 1.99 V | 224 | 41.84 | -91.09 |

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

LTE Band 2, Channel Bandwidth 5MHz

| Mode | TX channel 18625 (1852.50MHz) | Frequency Range | 1GHz ~ 20GHz |
|---|---|---|---|
| Environmental Conditions | 22deg. C, 66%RH | Input Power | 120Vac, 60Hz |
| Tested By | Greg Lin | | |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 3705.00 | -48.66 | -13.00 | -35.66 | 2.55 H | 175 | 42.96 | -91.62 |
| Antenna Polarity & Test Distance : Vertical at 3m | | | | | | | | |
| No | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 3705.00 | -49.63 | -13.00 | -36.63 | 1.93 V | 226 | 41.99 | -91.62 |

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

| Mode | TX channel 18900 (1880.00MHz) | Frequency Range | 1GHz ~ 20GHz |
|---|---|---|---|
| Environmental Conditions | 22deg. C, 66%RH | Input Power | 120Vac, 60Hz |
| Tested By | Greg Lin | | |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 3760.00 | -48.10 | -13.00 | -35.10 | 2.59 H | 173 | 43.32 | -91.42 |
| Antenna Polarity & Test Distance : Vertical at 3m | | | | | | | | |
| No | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 3760.00 | -49.75 | -13.00 | -36.75 | 1.95 V | 227 | 41.67 | -91.42 |

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

| Mode | TX channel 19175 (1907.50MHz) | Frequency Range | 1GHz ~ 20GHz |
|---|---|---|---|
| Environmental Conditions | 22deg. C, 66%RH | Input Power | 120Vac, 60Hz |
| Tested By | Greg Lin | | |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 3815.00 | -48.27 | -13.00 | -35.27 | 2.62 H | 177 | 42.83 | -91.10 |
| Antenna Polarity & Test Distance : Vertical at 3m | | | | | | | | |
| No | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 3815.00 | -49.42 | -13.00 | -36.42 | 1.91 V | 224 | 41.68 | -91.10 |

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

LTE Band 2, Channel Bandwidth 20MHz

| Mode | TX channel 18700 (1860.00MHz) | Frequency Range | 1GHz ~ 20GHz |
|---|---|---|---|
| Environmental Conditions | 22deg. C, 66%RH | Input Power | 120Vac, 60Hz |
| Tested By | Greg Lin | | |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 3720.00 | -48.35 | -13.00 | -35.35 | 2.59 H | 178 | 43.22 | -91.57 |
| Antenna Polarity & Test Distance : Vertical at 3m | | | | | | | | |
| No | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 3720.00 | -49.86 | -13.00 | -36.86 | 1.99 V | 223 | 41.71 | -91.57 |

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

| Mode | TX channel 18900 (1880.00MHz) | Frequency Range | 1GHz ~ 20GHz |
|---|---|---|---|
| Environmental Conditions | 22deg. C, 66%RH | Input Power | 120Vac, 60Hz |
| Tested By | Greg Lin | | |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 3760.00 | -48.11 | -13.00 | -35.11 | 2.51 H | 173 | 43.31 | -91.42 |
| Antenna Polarity & Test Distance : Vertical at 3m | | | | | | | | |
| No | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 3760.00 | -49.53 | -13.00 | -36.53 | 1.95 V | 222 | 41.89 | -91.42 |

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

| Mode | TX channel 19100 (1900.00MHz) | Frequency Range | 1GHz ~ 20GHz |
|---|---|---|---|
| Environmental Conditions | 22deg. C, 66%RH | Input Power | 120Vac, 60Hz |
| Tested By | Greg Lin | | |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 3800.00 | -48.16 | -13.00 | -35.16 | 2.58 H | 174 | 42.98 | -91.14 |
| Antenna Polarity & Test Distance : Vertical at 3m | | | | | | | | |
| No | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 3800.00 | -49.73 | -13.00 | -36.73 | 1.92 V | 234 | 41.41 | -91.14 |

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

LTE Band 66, Channel Bandwidth: 1.4MHz

| Mode | TX channel 131979 (1710.7MHz) | Frequency Range | 1GHz ~ 18GHz |
|---|---|---|---|
| Environmental Conditions | 22deg. C, 66%RH | Input Power | 120Vac, 60Hz |
| Tested By | Greg Lin | | |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 3421.40 | -45.37 | -13.00 | -32.37 | 2.02 H | 231 | 47.83 | -93.20 |
| Antenna Polarity & Test Distance : Vertical at 3m | | | | | | | | |
| No | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 3421.40 | -46.89 | -13.00 | -33.89 | 2.58 V | 91 | 46.31 | -93.20 |

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

| Mode | TX channel 132322 (1745.0MHz) | Frequency Range | 1GHz ~ 18GHz |
|---|---|---|---|
| Environmental Conditions | 22deg. C, 66%RH | Input Power | 120Vac, 60Hz |
| Tested By | Greg Lin | | |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 3490.00 | -44.88 | -13.00 | -31.88 | 1.99 H | 231 | 47.78 | -92.66 |
| Antenna Polarity & Test Distance : Vertical at 3m | | | | | | | | |
| No | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 3490.00 | -46.00 | -13.00 | -33.00 | 2.60 V | 92 | 46.66 | -92.66 |

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

| Mode | TX channel 132665 (1779.3MHz) | Frequency Range | 1GHz ~ 18GHz |
|---|---|---|---|
| Environmental Conditions | 22deg. C, 66%RH | Input Power | 120Vac, 60Hz |
| Tested By | Greg Lin | | |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 3558.60 | -43.96 | -13.00 | -30.96 | 2.05 H | 232 | 48.25 | -92.21 |
| Antenna Polarity & Test Distance : Vertical at 3m | | | | | | | | |
| No | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 3558.60 | -45.79 | -13.00 | -32.79 | 2.56 V | 91 | 46.42 | -92.21 |

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

LTE Band 66, Channel Bandwidth: 5MHz

| Mode | TX channel 131997 (1712.5MHz) | Frequency Range | 1GHz ~ 18GHz |
|---|---|---|---|
| Environmental Conditions | 22deg. C, 66%RH | Input Power | 120Vac, 60Hz |
| Tested By | Greg Lin | | |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 3425.00 | -45.29 | -13.00 | -32.29 | 2.07 H | 234 | 47.88 | -93.17 |
| Antenna Polarity & Test Distance : Vertical at 3m | | | | | | | | |
| No | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 3425.00 | -46.90 | -13.00 | -33.90 | 2.55 V | 93 | 46.27 | -93.17 |

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

| Mode | TX channel 132322 (1745.0MHz) | Frequency Range | 1GHz ~ 18GHz |
|---|---|---|---|
| Environmental Conditions | 22deg. C, 66%RH | Input Power | 120Vac, 60Hz |
| Tested By | Greg Lin | | |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 3490.00 | -44.62 | -13.00 | -31.62 | 2.09 H | 237 | 48.04 | -92.66 |
| Antenna Polarity & Test Distance : Vertical at 3m | | | | | | | | |
| No | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 3490.00 | -46.27 | -13.00 | -33.27 | 2.60 V | 94 | 46.39 | -92.66 |

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

| Mode | TX channel 132647 (1777.5MHz) | Frequency Range | 1GHz ~ 18GHz |
|---|---|---|---|
| Environmental Conditions | 22deg. C, 66%RH | Input Power | 120Vac, 60Hz |
| Tested By | Greg Lin | | |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 3555.00 | -44.08 | -13.00 | -31.08 | 2.05 H | 228 | 48.14 | -92.22 |
| Antenna Polarity & Test Distance : Vertical at 3m | | | | | | | | |
| No | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 3555.00 | -45.69 | -13.00 | -32.69 | 2.52 V | 103 | 46.53 | -92.22 |

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

LTE Band 66, Channel Bandwidth: 20MHz

| Mode | TX channel 132072 (1720.0MHz) | Frequency Range | 1GHz ~ 18GHz |
|---|---|---|---|
| Environmental Conditions | 22deg. C, 66%RH | Input Power | 120Vac, 60Hz |
| Tested By | Greg Lin | | |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 3440.00 | -44.79 | -13.00 | -31.79 | 2.08 H | 238 | 48.29 | -93.08 |
| Antenna Polarity & Test Distance : Vertical at 3m | | | | | | | | |
| No | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 3440.00 | -46.29 | -13.00 | -33.29 | 2.55 V | 101 | 46.79 | -93.08 |

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

| Mode | TX channel 132322 (1745.0MHz) | Frequency Range | 1GHz ~ 18GHz |
|---|---|---|---|
| Environmental Conditions | 22deg. C, 66%RH | Input Power | 120Vac, 60Hz |
| Tested By | Greg Lin | | |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 3490.00 | -44.45 | -13.00 | -31.45 | 2.09 H | 232 | 48.21 | -92.66 |
| Antenna Polarity & Test Distance : Vertical at 3m | | | | | | | | |
| No | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 3490.00 | -45.94 | -13.00 | -32.94 | 2.61 V | 92 | 46.72 | -92.66 |

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

| Mode | TX channel 132572 (1770.0MHz) | Frequency Range | 1GHz ~ 18GHz |
|---|---|---|---|
| Environmental Conditions | 22deg. C, 66%RH | Input Power | 120Vac, 60Hz |
| Tested By | Greg Lin | | |

| Antenna Polarity & Test Distance : Horizontal at 3 m | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 3540.00 | -44.02 | -13.00 | -31.02 | 2.01 H | 229 | 48.28 | -92.30 |
| Antenna Polarity & Test Distance : Vertical at 3m | | | | | | | | |
| No | Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Margin (dB) | Antenna Height (m) | Table Angle (Degree) | Raw Value (dBuV) | Correction Factor (dB/m) |
| 1 | 3540.00 | -45.51 | -13.00 | -32.51 | 2.63 V | 87 | 46.79 | -92.30 |

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

## 5 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo).

**Appendix – Information of the Testing Laboratories**

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are FCC recognized accredited test firms and accredited and approved according to ISO/IEC 17025.

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The address and road map of all our labs can be found in our web site also.

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