

FCC Test Report (PART 27)

Report No.: RF180321E03M-2

FCC ID: RI7LN960A16

Test Model: LN960A16

Received Date: Apr. 09, 2019

Test Date: Apr. 19 to May 05, 2019

Issued Date: May 27, 2019

Applicant: Telit Communication S.p.a

Address: loc. Sa Illetta, S.S. 195, Km 2.300, 09122 - Cagliari – ITALY

Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Hsin Chu Laboratory

Lab Address: E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300,
Taiwan R.O.C.

Test Location: E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300,
Taiwan R.O.C.

**FCC Registration /
Designation Number:** 723255 / TW2022



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Release Control Record

| Issue No. | Description | Date Issued |
|----------------|-------------------|--------------|
| RF180321E03M-2 | Original release. | May 27, 2019 |

1 Certificate of Conformity

Product: LTE M.2 Module

Brand: Telit

Test Model: LN960A16

Sample Status: ENGINEERING SAMPLE

Applicant: Telit Communication S.p.a

Test Date: Apr. 19 to May 05, 2019

Standards: FCC Part 27, Subpart D / F / H / L / M
FCC Part 2

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 EMC characteristics under the conditions specified in this report.

Prepared by : Wendy Wu , **Date:** May 27, 2019
Wendy Wu / Specialis

Approved by : May Chen , **Date:** May 27, 2019
May Chen / Manager

2 Summary of Test Results

| Applied Standard: FCC Part 27 & Part 2 | | | |
|--|--|--------|---|
| FCC Clause | Test Item | Result | Remarks |
| 2.1046 27.50 | Radiated Power | PASS | Meet the requirement of limit. |
| 2.1047 | Modulation characteristics | PASS | Meet the requirement |
| 2.1055 27.54 | Frequency Stability Stay with the authorized bands of operation | PASS | Meet the requirement of limit. |
| 2.1049 27.53 | Occupied Bandwidth | PASS | Meet the requirement of limit. |
| 27.53 | Band Edge Measurements | PASS | Meet the requirement of limit. |
| --- | Peak To Average Ratio | PASS | Meet the requirement of limit. |
| 2.1051 27.53 | Conducted Spurious Emissions | PASS | Meet the requirement of limit. |
| 2.1053 27.53 | Radiated Spurious Emissions | PASS | Meet the requirement of limit. Minimum passing margin is -16.32dB at 10030MHz. |

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 | 30MHz ~ 1GHz | 4.8 dB |
| Radiated Emissions above 1 GHz | 1GHz ~ 6GHz | 5.1 dB |
| | 6GHz ~ 18GHz | 5.0 dB |
| | 18GHz ~ 40GHz | 5.3 dB |

2.2 Test Site and Instruments

For radiated spurious emissions test:

| DESCRIPTION & MANUFACTURER | MODEL NO. | SERIAL NO. | CALIBRATED DATE | CALIBRATED UNTIL |
|---|----------------------|-------------|-----------------|------------------|
| Test Receiver Keysight | N9038A | MY54450088 | July 05, 2018 | July 04, 2019 |
| Spectrum Analyzer Keysight | N9030B | MY57141948 | June 01, 2018 | May 31, 2019 |
| Pre-Amplifier EMCI | EMC001340 | 980142 | Jan. 25, 2019 | Jan. 24, 2020 |
| Loop Antenna Electro-Metrics | EM-6879 | 269 | Sep. 07, 2018 | Sep. 06, 2019 |
| RF Cable | NA | LOOPCAB-001 | Jan. 14, 2019 | Jan. 13, 2020 |
| RF Cable | NA | LOOPCAB-002 | Jan. 14, 2019 | Jan. 13, 2020 |
| Pre-Amplifier EMCI | EMC330N | 980538 | May 07, 2018 | May 06, 2019 |
| Trilog Broadband Antenna SCHWARZBECK | VULB9168 | 9168-0842 | Nov. 21, 2018 | Nov. 20, 2019 |
| RF Cable | 8D | 966-5-1 | May 07, 2018 | May 06, 2019 |
| RF Cable | 8D | 966-5-2 | May 07, 2018 | May 06, 2019 |
| RF Cable | 8D | 966-5-3 | May 07, 2018 | May 06, 2019 |
| Fixed attenuator Mini-Circuits | UNAT-5+ | PAD-ATT5-02 | Jan. 28, 2019 | Jan. 27, 2020 |
| Horn_Antenna SCHWARZBECK | BBHA 9120D | 9120D-1819 | Nov. 25, 2018 | Nov. 24, 2019 |
| Pre-Amplifier EMCI | EMC12630SE | 980509 | May 07, 2018 | May 06, 2019 |
| RF Cable EMCI | EMC104-SM-SM-1500 | 180503 | May 07, 2018 | May 06, 2019 |
| RF Cable EMCI | EMC104-SM-SM-2000 | 180501 | May 07, 2018 | May 06, 2019 |
| RF Cable EMCI | EMC104-SM-SM-6000 | 180505 | May 07, 2018 | May 06, 2019 |
| Pre-Amplifier EMCI | EMC184045SE | 980387 | Jan. 28, 2019 | Jan. 27, 2020 |
| Horn_Antenna SCHWARZBECK | BBHA 9170 | BBHA9170519 | Nov. 25, 2018 | Nov. 24, 2019 |
| RF Cable | EMC102-KM-KM-1200 | 160924 | Jan. 28, 2019 | Jan. 27, 2020 |
| RF Cable | EMC102-KM-KM-1200 | 160925 | Jan. 28, 2019 | Jan. 27, 2020 |
| Software | ADT_Radiated_V8.7.08 | NA | NA | NA |
| Boresight Antenna Tower & Turn Table Max-Full | MF-7802BS | MF780208530 | 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 966 Chamber No. 5.
3. Loop antenna was used for all emissions below 30 MHz.
4. Tested Date: Apr. 22 to May 05, 2019

For other test:

| DESCRIPTION & MANUFACTURER | MODEL NO. | SERIAL NO. | CALIBRATED DATE | CALIBRATED UNTIL |
|--|-------------------------------|---------------------------------------|-----------------|------------------|
| Spectrum Analyzer R&S | FSV40 | 100964 | June 20, 2018 | June 19, 2019 |
| Spectrum Analyzer Agilent | E4446A | MY48250254 | Nov. 14, 2018 | Nov. 13, 2019 |
| Power meter Anritsu | ML2495A | 1014008 | May 09, 2018 | May 08, 2019 |
| Power sensor Anritsu | MA2411B | 0917122 | May 09, 2018 | May 08, 2019 |
| Fixed Attenuator Mini-Circuits | MDCS18N-10 | MDCS18N-10-01 | Apr. 15, 2019 | Apr. 14, 2020 |
| AC Power Source Extech Electronics | 6205 | 1440452 | NA | NA |
| DC Power Supply Topward | 6603D | 795558 | NA | NA |
| Temperature & Humidity Chamber Giant Force | GTH-150-40-SP-AR | MAA0812-008 | Jan. 09, 2019 | Jan. 08, 2020 |
| True RMS Clamp Meter FLUKE | 325 | 31130711WS | May 22, 2018 | May 21, 2019 |
| ESG Vector signal generator Agilent | E4438C | MY45094468/ 005 506 602 UK6 UNJ | Nov. 19, 2018 | Nov. 18, 2019 |
| Mech Switch Absorptive Mini-Circuits | MSP4TA-18+ | 0140 | Feb. 11, 2019 | Feb. 10, 2020 |
| FXD ATTEN Mini-Circuits | BW-S3W2+ | MN71981 | Feb. 11, 2019 | Feb. 10, 2020 |
| Software | ADT_RF Test Software V6.6.5.4 | NA | NA | NA |

- NOTE:**
1. The test was performed in Oven room 2.
 2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 3. Tested Date: Apr. 19 to 21, 2019

3 General Information

3.1 General Description of EUT

| | | |
|---------------------|--|---------------------|
| Product | LTE M.2 Module | |
| Brand | Telit | |
| Test Model | LN960A16 | |
| Status of EUT | ENGINEERING SAMPLE | |
| Power Supply Rating | DC 3.3V from host equipment | |
| Modulation Type | WCDMA, HSDPA, HSUPA | BPSK |
| | LTE | QPSK, 16QAM, 64QAM |
| Operating Frequency | WCDMA Band 4 | 1712.4 ~ 1752.6 MHz |
| | LTE Band 4 | 1710.7 ~ 1754.3 MHz |
| | LTE Band 7 | 2502.5 ~ 2567.5 MHz |
| | LTE Band 12 | 699.7 ~ 715.3 MHz |
| | LTE Band 13 | 779.5 ~ 784.5 MHz |
| | LTE Band 17 | 706.5 ~ 713.5 MHz |
| | LTE Band 30 | 2307.5 ~ 2312.5MHz |
| | LTE Band 38 | 2572.5 ~ 2617.5MHz |
| | LTE Band 41 | 2498.5 ~ 2687.5MHz |
| | LTE Band 66 | 1710.7 ~ 1779.3MHz |
| Max. EIRP Power | WCDMA Band 4 | 29.98dBm |
| | LTE Band 4 (Channel Bandwidth 1.4MHz) | 29.88dBm |
| | LTE Band 4 (Channel Bandwidth 3MHz) | 29.70dBm |
| | LTE Band 4 (Channel Bandwidth 5MHz) | 29.62dBm |
| | LTE Band 4 (Channel Bandwidth 10MHz) | 29.81dBm |
| | LTE Band 4 (Channel Bandwidth 15MHz) | 29.87dBm |
| | LTE Band 4 (Channel Bandwidth 20MHz) | 29.85dBm |
| | LTE Band 7 (Channel Bandwidth 5MHz) | 28.88dBm |
| | LTE Band 7 (Channel Bandwidth 10MHz) | 28.01dBm |
| | LTE Band 7 (Channel Bandwidth 15MHz) | 29.02dBm |
| | LTE Band 7 (Channel Bandwidth 20MHz) | 29.05dBm |
| | LTE Band 7 (Channel Bandwidth 15+20MHz) | 28.70dBm |
| | LTE Band 7 (Channel Bandwidth 20+20MHz) | 25.76dBm |

| | | |
|-----------------|---|----------|
| Max. EIRP Power | LTE Band 38 (Channel Bandwidth 5MHz) | 28.63dBm |
| | LTE Band 38 (Channel Bandwidth 10MHz) | 28.53dBm |
| | LTE Band 38 (Channel Bandwidth 15MHz) | 28.61dBm |
| | LTE Band 38 (Channel Bandwidth 20MHz) | 28.42dBm |
| | LTE Band 38 (Channel Bandwidth 15+15MHz) | 28.05dBm |
| | LTE Band 38 (Channel Bandwidth 20+20MHz) | 26.00dBm |
| | LTE Band 41 (Channel Bandwidth 5MHz) | 29.25dBm |
| | LTE Band 41 (Channel Bandwidth 10MHz) | 29.13dBm |
| | LTE Band 41 (Channel Bandwidth 15MHz) | 29.10dBm |
| | LTE Band 41 (Channel Bandwidth 20MHz) | 29.21dBm |
| | LTE Band 41 (Channel Bandwidth 10+5MHz) | 28.96dBm |
| | LTE Band 41 (Channel Bandwidth 20+20MHz) | 27.20dBm |
| | LTE Band 66 (Channel Bandwidth 1.4MHz) | 29.78dBm |
| | LTE Band 66 (Channel Bandwidth 3MHz) | 29.87dBm |
| | LTE Band 66 (Channel Bandwidth 5MHz) | 29.81dBm |
| | LTE Band 66 (Channel Bandwidth 10MHz) | 29.84dBm |
| | LTE Band 66 (Channel Bandwidth 15MHz) | 29.80dBm |
| | LTE Band 66 (Channel Bandwidth 20MHz) | 29.83dBm |

| | | |
|-------------------------|---|-------------------------------|
| Max. ERP Power | LTE Band 12 (Channel Bandwidth 1.4MHz) | 25.93dBm |
| | LTE Band 12 (Channel Bandwidth 3MHz) | 25.91dBm |
| | LTE Band 12 (Channel Bandwidth 5MHz) | 25.94dBm |
| | LTE Band 12 (Channel Bandwidth 10MHz) | 26.04dBm |
| | LTE Band 13 (Channel Bandwidth 5MHz) | 24.98dBm |
| | LTE Band 13 (Channel Bandwidth 10MHz) | 24.73dBm |
| | LTE Band 17 (Channel Bandwidth 5MHz) | 25.93dBm |
| | LTE Band 17 (Channel Bandwidth 10MHz) | 26.10dBm |
| Max. EIRP Power Density | LTE Band 30 (Channel Bandwidth 5MHz) | 246.60mW/5MHz (23.92dBm/5MHz) |
| | LTE Band 30 (Channel Bandwidth 10MHz) | 238.78mW/5MHz (23.78dBm/5MHz) |

| | | |
|--|--|----------------|
| Emission Designator | WCDMA Band 4 | 4M13F9W |
| | LTE Band 4 (Channel Bandwidth 1.4MHz) | QPSK: 1M08G7D |
| | | 16QAM: 1M09D7W |
| | | 64QAM: 1M09D7W |
| | LTE Band 4 (Channel Bandwidth 3MHz) | QPSK: 2M70G7D |
| | | 16QAM: 2M68D7W |
| | | 64QAM: 2M70D7W |
| | LTE Band 4 (Channel Bandwidth 5MHz) | QPSK: 4M51G7D |
| | | 16QAM: 4M51D7W |
| | | 64QAM: 4M51D7W |
| | LTE Band 4 (Channel Bandwidth 10MHz) | QPSK: 9M00G7D |
| | | 16QAM: 9M00D7W |
| | | 64QAM: 9M00D7W |
| | LTE Band 4 (Channel Bandwidth 15MHz) | QPSK: 13M5G7D |
| | | 16QAM: 13M5D7W |
| | | 64QAM: 13M5D7W |
| | LTE Band 4 (Channel Bandwidth 20MHz) | QPSK: 18M0G7D |
| | | 16QAM: 17M9D7W |
| | | 64QAM: 18M0D7W |
| | LTE Band 7 (Channel Bandwidth 5MHz) | QPSK: 4M51G7D |
| | | 16QAM: 4M52D7W |
| | | 64QAM: 4M51D7W |
| | LTE Band 7 (Channel Bandwidth 10MHz) | QPSK: 9M00G7D |
| | | 16QAM: 9M00D7W |
| | | 64QAM: 9M00D7W |
| | LTE Band 7 (Channel Bandwidth 15MHz) | QPSK: 13M5G7D |
| | | 16QAM: 13M5D7W |
| | | 64QAM: 13M5D7W |
| | LTE Band 7 (Channel Bandwidth 20MHz) | QPSK: 18M0G7D |
| | | 16QAM: 17M9D7W |
| 64QAM: 17M9D7W | | |
| LTE Band 7 (Channel Bandwidth 15+20MHz) | QPSK: 32M8G7D | |
| LTE Band 7 (Channel Bandwidth 20+20MHz) | QPSK: 37M6G7D | |
| LTE Band 12 (Channel Bandwidth 1.4MHz) | QPSK: 1M08G7D | |
| | 16QAM: 1M09D7W | |
| | 64QAM: 1M09D7W | |
| LTE Band 12 (Channel Bandwidth 3MHz) | QPSK: 2M71G7D | |
| | 16QAM: 2M69D7W | |
| | 64QAM: 2M70D7W | |
| LTE Band 12 (Channel Bandwidth 5MHz) | QPSK: 4M51G7D | |
| | 16QAM: 4M51D7W | |
| | 64QAM: 4M50D7W | |
| LTE Band 12 (Channel Bandwidth 10MHz) | QPSK: 9M00G7D | |
| | 16QAM: 9M02D7W | |
| | 64QAM: 8M98D7W | |

| | | |
|---|--|----------------|
| Emission Designator | LTE Band 13 (Channel Bandwidth 5MHz) | QPSK: 4M51G7D |
| | | 16QAM: 4M51D7W |
| | | 64QAM: 4M49D7W |
| | LTE Band 13 (Channel Bandwidth 10MHz) | QPSK: 8M90G7D |
| | | 16QAM: 8M92D7W |
| | | 64QAM: 8M96D7W |
| | LTE Band 17 (Channel Bandwidth 5MHz) | QPSK: 4M51G7D |
| | | 16QAM: 4M51D7W |
| | | 64QAM: 4M51D7W |
| | LTE Band 17 (Channel Bandwidth 10MHz) | QPSK: 9M00G7D |
| | | 16QAM: 9M02D7W |
| | | 64QAM: 9M02D7W |
| | LTE Band 30 (Channel Bandwidth 5MHz) | QPSK: 4M51G7D |
| | | 16QAM: 4M50D7W |
| | | 64QAM: 4M51D7W |
| | LTE Band 30 (Channel Bandwidth 10MHz) | QPSK: 9M00G7D |
| | | 16QAM: 9M02D7W |
| | | 64QAM: 8M98D7W |
| LTE Band 38 (Channel Bandwidth 5MHz) | QPSK: 4M49G7D | |
| | 16QAM: 4M51D7W | |
| | 64QAM: 4M50D7W | |
| LTE Band 38 (Channel Bandwidth 10MHz) | QPSK: 8M96G7D | |
| | 16QAM: 9M00D7W | |
| | 64QAM: 9M00D7W | |
| LTE Band 38 (Channel Bandwidth 15MHz) | QPSK: 13M5G7D | |
| | 16QAM: 13M4D7W | |
| | 64QAM: 13M5D7W | |
| LTE Band 38 (Channel Bandwidth 20MHz) | QPSK: 18M0G7D | |
| | 16QAM: 17M9D7W | |
| | 64QAM: 18M0D7W | |
| LTE Band 38 (Channel Bandwidth 15+15MHz) | QPSK: 28M3G7D | |
| LTE Band 38 (Channel Bandwidth 20+20MHz) | QPSK: 37M7G7D | |

| | | |
|--|---|----------------|
| Emission Designator | LTE Band 41 (Channel Bandwidth 5MHz) | QPSK: 4M49G7D |
| | | 16QAM: 4M51D7W |
| | | 64QAM: 4M52D7W |
| | LTE Band 41 (Channel Bandwidth 10MHz) | QPSK: 8M96G7D |
| | | 16QAM: 9M00D7W |
| | | 64QAM: 9M00D7W |
| | LTE Band 41 (Channel Bandwidth 15MHz) | QPSK: 13M5G7D |
| | | 16QAM: 13M4D7W |
| | | 64QAM: 13M5D7W |
| | LTE Band 41 (Channel Bandwidth 20MHz) | QPSK: 18M0G7D |
| | | 16QAM: 17M9D7W |
| | | 64QAM: 18M0D7W |
| | LTE Band 41 (Channel Bandwidth 10+5MHz) | QPSK: 13M9G7D |
| | LTE Band 41 (Channel Bandwidth 20+20MHz) | QPSK: 37M6G7D |
| | LTE Band 66 (Channel Bandwidth 1.4MHz) | QPSK: 1M09G7D |
| | | 16QAM: 1M10D7W |
| | | 64QAM: 1M09D7W |
| | LTE Band 66 (Channel Bandwidth 3MHz) | QPSK: 2M70G7D |
| | | 16QAM: 2M68D7W |
| | | 64QAM: 2M69D7W |
| LTE Band 66 (Channel Bandwidth 5MHz) | QPSK: 4M50G7D | |
| | 16QAM: 4M51D7W | |
| | 64QAM: 4M51D7W | |
| LTE Band 66 (Channel Bandwidth 10MHz) | QPSK: 9M02G7D | |
| | 16QAM: 9M00D7W | |
| | 64QAM: 9M00D7W | |
| LTE Band 66 (Channel Bandwidth 15MHz) | QPSK: 13M5G7D | |
| | 16QAM: 13M5D7W | |
| | 64QAM: 13M5D7W | |
| LTE Band 66 (Channel Bandwidth 20MHz) | QPSK: 18M0G7D | |
| | 16QAM: 17M9D7W | |
| | 64QAM: 18M0D7W | |
| Antenna Type | Refer to Note | |
| Antenna Connector | Refer to Note | |
| Accessory Device | NA | |
| Data Cable Supplied | NA | |

Note:

1. The antennas provided to the EUT, please refer to the following table:

| Antenna No. | Antenna Net Gain(dBi) | Frequency range (MHz) | Antenna Type | Connector Type | Cable Length |
|-------------|-----------------------------|---------------------------|--------------|----------------|--------------|
| 1 | Please refer to below table | 699~803 | PIFA | i-pex(MHF) | 100mm |
| 2 | Please refer to below table | 791~960 1447.9~1606 | PIFA | i-pex(MHF) | 100mm |
| 3 | Please refer to below table | 1710~2170 2500~2690 | PIFA | i-pex(MHF) | 100mm |
| 4 | Please refer to below table | 5110~5925 (for LAA RX) | PIFA | i-pex(MHF) | 100mm |
| 5 | Please refer to below table | 2305~2315 | Dipole | i-pex(MHF) | 80mm |

Antenna gain list

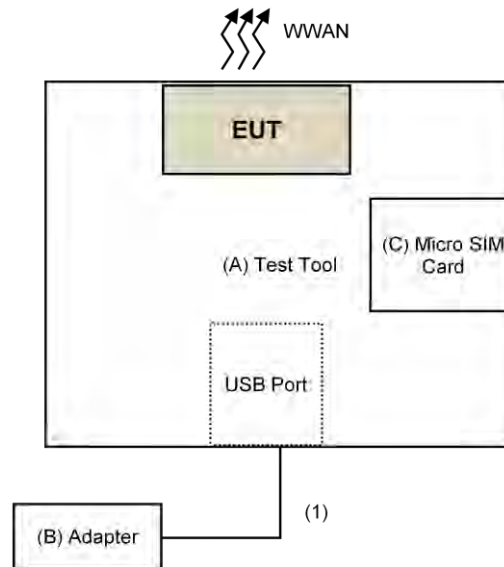
| Antenna No. | Band | Freq. Range (MHz) | Gain (dBi) |
|-------------|---------------|-------------------|------------|
| 3 | WCDMA II (B2) | 1850~1910 | 4.92 |
| 3 | WCDMA IV (B4) | 1710~1755 | 5.99 |
| 2 | WCDMA V (B5) | 824~849 | 2.68 |
| 3 | LTE Band (2) | 1850~1910 | 4.92 |
| 3 | LTE Band (4) | 1710~1755 | 5.99 |
| 2 | LTE Band (5) | 824~849 | 2.68 |
| 3 | LTE Band (7) | 2500~2570 | 5.2 |
| 1 | LTE Band (12) | 698~716 | 4.17 |
| 1 | LTE Band (13) | 777~787 | 3.05 |
| 1 | LTE Band (14) | 788~798 | 2.87 |
| 1 | LTE Band (17) | 704~716 | 4.17 |
| 3 | LTE Band (25) | 1850~1915 | 4.92 |
| 2 | LTE Band (26) | 814~849 | 2.92 |
| 5 | LTE Band (30) | 2305~2315 | 3.02 |
| 3 | LTE Band (38) | 2570~2620 | 4.82 |
| 3 | LTE Band (41) | 2496~2690 | 5.38 |
| 3 | LTE Band (66) | 1710~1780 | 5.99 |

2. This device is UE LTE module that can support carrier aggregation (two carrier) uplink Intra-Band contiguous, specification following as below:

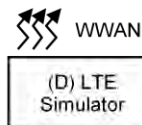
| Uplink CA Configurations | Component carriers in order of increasing carrier frequency | | Maximum Aggregated Bandwidth [MHz] | Bandwidth Combination Set | |
|--------------------------|---|--|------------------------------------|---------------------------|---|
| | Channel bandwidths for carrier-1 [MHz] | Channel bandwidths for carrier-2 [MHz] | | | |
| CA_7C | 15 | 15 | 40 | 0 | |
| | 20 | 20 | | | |
| | 10 | 20 | 40 | 1 | |
| | 15 | 15, 20 | | | |
| | 20 | 10, 15, 20 | | | |
| | 15 | 10, 15 | | | |
| CA_38C | 20 | 15, 20 | 40 | 2 | |
| | 15 | 15 | | | |
| CA_41C | 20 | 20 | 40 | 0 | |
| | 10 | 20 | | | |
| | 15 | 15, 20 | | | |
| | 20 | 10, 15, 20 | 40 | 1 | |
| | 5, 10 | 20 | | | |
| | 15 | 15, 20 | | | |
| | 20 | 5, 10, 15, 20 | | | |
| | CA_41C | 10 | 15, 20 | 40 | 2 |
| | | 15 | 10, 15, 20 | | |
| | | 20 | 10, 15, 20 | | |
| | | 10 | 20 | | |
| CA_41C | 20 | 20 | 40 | 3 | |

3. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.

3.2 Configuration of System under Test



Remote Site



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. | Test Tool | Foxconn | LN960A16 | NA | NA | Supplied by client |
| B. | Adapter | ASUS | EXA1205UA | NA | NA | Provided by Lab |
| C. | SIM Card | NA | NA | NA | NA | Provided by Lab |
| D. | Simulator | Keysight | E7515A | MY56030229 | NA | Provided by Lab |

Note:

1. All power cords of the above support units are non-shielded (1.8m).

| ID | Descriptions | Qty. | Length (m) | Shielding (Yes/No) | Cores (Qty.) | Remarks |
|----|--------------|------|------------|--------------------|--------------|-----------------|
| 1. | USB Cable | 1 | 1 | Yes | 0 | Provided by Lab |

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 X-plane. Following channel(s) was (were) selected for the final test as listed below:

WCDMA Band 4

| TEST ITEM | AVAILABLE CHANNEL | TESTED CHANNEL | MODE |
|-----------------------|-------------------|------------------|-------|
| EIRP | 1312 to 1513 | 1312, 1413, 1513 | WCDMA |
| Frequency Stability | 1312 to 1513 | 1413 | WCDMA |
| Occupied Bandwidth | 1312 to 1513 | 1312, 1413, 1513 | WCDMA |
| Peak to Average Ratio | 1312 to 1513 | 1312, 1413, 1513 | WCDMA |
| Band Edge | 1312 to 1513 | 1312, 1513 | WCDMA |
| Conducted Emission | 1312 to 1513 | 1312, 1413, 1513 | WCDMA |
| Radiated Emission | 1312 to 1513 | 1312, 1413, 1513 | WCDMA |

LTE Band 4

| TEST ITEM | AVAILABLE CHANNEL | TESTED CHANNEL | CHANNEL BANDWIDTH | MODULATION | MODE |
|-----------------------|-------------------|---------------------|-------------------|------------------|----------------------|
| EIRP | 19957 to 20393 | 19957, 20175, 20393 | 1.4MHz | QPSK/16QAM/64QAM | 1RB / 0 RB offset |
| | 19965 to 20385 | 19965, 20175, 20385 | 3MHz | QPSK/16QAM/64QAM | 1RB / 0 RB offset |
| | 19975 to 20375 | 19975, 20175, 20375 | 5MHz | QPSK/16QAM/64QAM | 1RB / 0 RB offset |
| | 20000 to 20350 | 20000, 20175, 20350 | 10MHz | QPSK/16QAM/64QAM | 1RB / 0 RB offset |
| | 20025 to 20325 | 20025, 20175, 20325 | 15MHz | QPSK/16QAM/64QAM | 1RB / 0 RB offset |
| | 20050 to 20300 | 20050, 20175, 20300 | 20MHz | QPSK/16QAM/64QAM | 1RB / 0 RB offset |
| Frequency Stability | 19957 to 20393 | 20175 | 1.4MHz | QPSK | - |
| | 19965 to 20385 | 20175 | 3MHz | QPSK | - |
| | 19975 to 20375 | 20175 | 5MHz | QPSK | - |
| | 20000 to 20350 | 20175 | 10MHz | QPSK | - |
| | 20025 to 20325 | 20175 | 15MHz | QPSK | - |
| | 20050 to 20300 | 20175 | 20MHz | QPSK | - |
| Occupied Bandwidth | 19957 to 20393 | 19957, 20175, 20393 | 1.4MHz | QPSK/16QAM/64QAM | Full RB |
| | 19965 to 20385 | 19965, 20175, 20385 | 3MHz | QPSK/16QAM/64QAM | Full RB |
| | 19975 to 20375 | 19975, 20175, 20375 | 5MHz | QPSK/16QAM/64QAM | Full RB |
| | 20000 to 20350 | 20000, 20175, 20350 | 10MHz | QPSK/16QAM/64QAM | Full RB |
| | 20025 to 20325 | 20025, 20175, 20325 | 15MHz | QPSK/16QAM/64QAM | Full RB |
| | 20050 to 20300 | 20050, 20175, 20300 | 20MHz | QPSK/16QAM/64QAM | Full RB |
| Peak to Average Ratio | 19957 to 20393 | 19957, 20175, 20393 | 1.4MHz | QPSK/16QAM/64QAM | Full RB |
| | 19965 to 20385 | 19965, 20175, 20385 | 3MHz | QPSK/16QAM/64QAM | Full RB |
| | 19975 to 20375 | 19975, 20175, 20375 | 5MHz | QPSK/16QAM/64QAM | Full RB |
| | 20000 to 20350 | 20000, 20175, 20350 | 10MHz | QPSK/16QAM/64QAM | Full RB |
| | 20025 to 20325 | 20025, 20175, 20325 | 15MHz | QPSK/16QAM/64QAM | Full RB |
| | 20050 to 20300 | 20050, 20175, 20300 | 20MHz | QPSK/16QAM/64QAM | Full RB |
| Band Edge | 19957 to 20393 | 19957 | 1.4MHz | QPSK | 1 RB / 0 RB Offset |
| | | 20393 | | | 1 RB / 5 RB Offset |
| | | 19957, 20393 | | | 6 RB / 0 RB Offset |
| | 19965 to 20385 | 19965 | 3MHz | QPSK | 1 RB / 0 RB Offset |
| | | 20385 | | | 1 RB / 14 RB Offset |
| | | 19965, 20385 | | | 15 RB / 0 RB Offset |
| | 19975 to 20375 | 19975 | 5MHz | QPSK | 1 RB / 0 RB Offset |
| | | 20375 | | | 1 RB / 24 RB Offset |
| | | 19975, 20375 | | | 25 RB / 0 RB Offset |
| | 20000 to 20350 | 20000 | 10MHz | QPSK | 1 RB / 0 RB Offset |
| | | 20350 | | | 1 RB / 49 RB Offset |
| | | 20000, 20350 | | | 50 RB / 0 RB Offset |
| | 20025 to 20325 | 20025 | 15MHz | QPSK | 1 RB / 0 RB Offset |
| | | 20325 | | | 1 RB / 74 RB Offset |
| | | 20025, 20325 | | | 75 RB / 0 RB Offset |
| | 20050 to 20300 | 20050 | 20MHz | QPSK | 1 RB / 0 RB Offset |
| | | 20300 | | | 1 RB / 99 RB Offset |
| | | 20050, 20300 | | | 100 RB / 0 RB Offset |

| | | | | | |
|--------------------|----------------|---------------------|--------|------|--------------------|
| Conducted Emission | 19957 to 20393 | 19957, 20175, 20393 | 1.4MHz | QPSK | 1 RB / 0 RB Offset |
| | 19965 to 20385 | 19965, 20175, 20385 | 3MHz | QPSK | 1 RB / 0 RB Offset |
| | 19975 to 20375 | 19975, 20175, 20375 | 5MHz | QPSK | 1 RB / 0 RB Offset |
| | 20000 to 20350 | 20000, 20175, 20350 | 10MHz | QPSK | 1 RB / 0 RB Offset |
| | 20025 to 20325 | 20025, 20175, 20325 | 15MHz | QPSK | 1 RB / 0 RB Offset |
| | 20050 to 20300 | 20050, 20175, 20300 | 20MHz | QPSK | 1 RB / 0 RB Offset |
| Radiated Emission | 19957 to 20393 | 19957, 20175, 20393 | 1.4MHz | QPSK | 1 RB / 0 RB Offset |
| | 19965 to 20385 | 19965, 20175, 20385 | 3MHz | QPSK | 1 RB / 0 RB Offset |
| | 19975 to 20375 | 19975, 20175, 20375 | 5MHz | QPSK | 1 RB / 0 RB Offset |
| | 20000 to 20350 | 20000, 20175, 20350 | 10MHz | QPSK | 1 RB / 0 RB Offset |
| | 20025 to 20325 | 20025, 20175, 20325 | 15MHz | QPSK | 1 RB / 0 RB Offset |
| | 20050 to 20300 | 20050, 20175, 20300 | 20MHz | QPSK | 1 RB / 0 RB Offset |

LTE Band 7

| TEST ITEM | AVAILABLE CHANNEL | TESTED CHANNEL | CHANNEL BANDWIDTH | MODULATION | MODE |
|-----------------------|-------------------|---------------------|-------------------|------------------|----------------------|
| EIRP | 20775 to 21425 | 20775, 21100, 21425 | 5MHz | QPSK/16QAM/64QAM | 1RB / 0 RB offset |
| | 20800 to 21400 | 20800, 21100, 21400 | 10MHz | QPSK/16QAM/64QAM | 1RB / 0 RB offset |
| | 20825 to 21375 | 20825, 21100, 21375 | 15MHz | QPSK/16QAM/64QAM | 1RB / 0 RB offset |
| | 20850 to 21350 | 20850, 21100, 21350 | 20MHz | QPSK/16QAM/64QAM | 1RB / 0 RB offset |
| Frequency Stability | 20775 to 21425 | 21100 | 5MHz | QPSK | - |
| | 20800 to 21400 | 21100 | 10MHz | QPSK | - |
| | 20825 to 21375 | 21100 | 15MHz | QPSK | - |
| | 20850 to 21350 | 21100 | 20MHz | QPSK | - |
| Occupied Bandwidth | 20775 to 21425 | 20775, 21100, 21425 | 5MHz | QPSK/16QAM/64QAM | Full RB |
| | 20800 to 21400 | 20800, 21100, 21400 | 10MHz | QPSK/16QAM/64QAM | Full RB |
| | 20825 to 21375 | 20825, 21100, 21375 | 15MHz | QPSK/16QAM/64QAM | Full RB |
| | 20850 to 21350 | 20850, 21100, 21350 | 20MHz | QPSK/16QAM/64QAM | Full RB |
| Peak to Average Ratio | 20775 to 21425 | 20775, 21100, 21425 | 5MHz | QPSK/16QAM/64QAM | Full RB |
| | 20800 to 21400 | 20800, 21100, 21400 | 10MHz | QPSK/16QAM/64QAM | Full RB |
| | 20825 to 21375 | 20825, 21100, 21375 | 15MHz | QPSK/16QAM/64QAM | Full RB |
| | 20850 to 21350 | 20850, 21100, 21350 | 20MHz | QPSK/16QAM/64QAM | Full RB |
| Band Edge | 20775 to 21425 | 20775 | 5MHz | QPSK | 1 RB / 0 RB Offset |
| | | 21425 | | | 1 RB / 24 RB Offset |
| | | 20775, 21425 | | | 25 RB / 0 RB Offset |
| | 20800 to 21400 | 20800 | 10MHz | QPSK | 1 RB / 0 RB Offset |
| | | 21400 | | | 1 RB / 49 RB Offset |
| | | 20800, 21400 | | | 50 RB / 0 RB Offset |
| | 20825 to 21375 | 20825 | 15MHz | QPSK | 1 RB / 0 RB Offset |
| | | 21375 | | | 1 RB / 74 RB Offset |
| | | 20825, 21375 | | | 75 RB / 0 RB Offset |
| | 20850 to 21350 | 20850 | 20MHz | QPSK | 1 RB / 0 RB Offset |
| | | 21350 | | | 1 RB / 99 RB Offset |
| | | 20850, 21350 | | | 100 RB / 0 RB Offset |
| Conducted Emission | 20775 to 21425 | 20775, 21100, 21425 | 5MHz | QPSK | 1 RB / 0 RB Offset |
| | 20800 to 21400 | 20800, 21100, 21400 | 10MHz | QPSK | 1 RB / 0 RB Offset |
| | 20825 to 21375 | 20825, 21100, 21375 | 15MHz | QPSK | 1 RB / 0 RB Offset |
| | 20850 to 21350 | 20850, 21100, 21350 | 20MHz | QPSK | 1 RB / 0 RB Offset |
| Radiated Emission | 20775 to 21425 | 20775, 21100, 21425 | 5MHz | QPSK | 1 RB / 0 RB Offset |
| | 20800 to 21400 | 20800, 21100, 21400 | 10MHz | QPSK | 1 RB / 0 RB Offset |
| | 20825 to 21375 | 20825, 21100, 21375 | 15MHz | QPSK | 1 RB / 0 RB Offset |
| | 20850 to 21350 | 20850, 21100, 21350 | 20MHz | QPSK | 1 RB / 0 RB Offset |

LTE CA 7C

| TEST ITEM | MODULATION | PCC | | | SCC | | |
|-----------------------|------------|-------------------|----------------|--------------------|-------------------|----------------|---------------------|
| | | CHANNEL BANDWIDTH | TESTED CHANNEL | MODE | CHANNEL BANDWIDTH | TESTED CHANNEL | MODE |
| EIRP | QPSK | 15MHz | 21100 | 1RB / 0 RB offset | 20MHz | 21271 | 0RB / 0 RB offset |
| Frequency Stability | QPSK | 15MHz | 21100 | - | 20MHz | 21271 | - |
| Occupied Bandwidth | QPSK | 15MHz | 21100 | 75RB / 0 RB offset | 20MHz | 21271 | 100RB / 0 RB offset |
| Peak to Average Ratio | QPSK | 15MHz | 21100 | 75RB / 0 RB offset | 20MHz | 21271 | 100RB / 0 RB offset |
| Band Edge | QPSK | 15MHz | 20825 | 75RB / 0 RB offset | 20MHz | 20996 | 100RB / 0 RB offset |
| | | | | 1RB / 0 RB offset | | | 0RB / 0 RB offset |
| | | | 21179 | 75RB / 0 RB offset | | 21350 | 100RB / 0 RB offset |
| | | | | 0RB / 0 RB offset | | | 1RB / 99 RB offset |
| Conducted Emission | QPSK | 15MHz | 21100 | 1RB / 0 RB offset | 20MHz | 21271 | 0RB / 0 RB offset |
| Radiated Emission | QPSK | 15MHz | 21100 | 1RB / 0 RB offset | 20MHz | 21271 | 0RB / 0 RB offset |

Note: This product supports multiple carriers in intra-band contiguous spectrum operation, therefore test mode and test configurations follow KDB inquiry (more detail information refer "Operation Description.pdf").

LTE Band 12

| TEST ITEM | AVAILABLE CHANNEL | TESTED CHANNEL | CHANNEL BANDWIDTH | MODULATION | MODE |
|-----------------------|-------------------|---------------------|-------------------|------------------|---------------------|
| EIRP | 23017 to 23173 | 23017, 23095, 23173 | 1.4MHz | QPSK/16QAM/64QAM | 1RB / 0 RB offset |
| | 23025 to 23165 | 23025, 23095, 23165 | 3MHz | QPSK/16QAM/64QAM | 1RB / 0 RB offset |
| | 23035 to 23155 | 23035, 23095, 23155 | 5MHz | QPSK/16QAM/64QAM | 1RB / 0 RB offset |
| | 23060 to 23130 | 23060, 23095, 23130 | 10MHz | QPSK/16QAM/64QAM | 1RB / 0 RB offset |
| Frequency Stability | 23017 to 23173 | 23095 | 1.4MHz | QPSK | - |
| | 23025 to 23165 | 23095 | 3MHz | QPSK | - |
| | 23035 to 23155 | 23095 | 5MHz | QPSK | - |
| | 23060 to 23130 | 23095 | 10MHz | QPSK | - |
| Occupied Bandwidth | 23017 to 23173 | 23017, 23095, 23173 | 1.4MHz | QPSK/16QAM/64QAM | Full RB |
| | 23025 to 23165 | 23025, 23095, 23165 | 3MHz | QPSK/16QAM/64QAM | Full RB |
| | 23035 to 23155 | 23035, 23095, 23155 | 5MHz | QPSK/16QAM/64QAM | Full RB |
| | 23060 to 23130 | 23060, 23095, 23130 | 10MHz | QPSK/16QAM/64QAM | Full RB |
| Peak to Average Ratio | 23017 to 23173 | 23017, 23095, 23173 | 1.4MHz | QPSK/16QAM/64QAM | Full RB |
| | 23025 to 23165 | 23025, 23095, 23165 | 3MHz | QPSK/16QAM/64QAM | Full RB |
| | 23035 to 23155 | 23035, 23095, 23155 | 5MHz | QPSK/16QAM/64QAM | Full RB |
| | 23060 to 23130 | 23060, 23095, 23130 | 10MHz | QPSK/16QAM/64QAM | Full RB |
| Band Edge | 23017 to 23173 | 23017 | 1.4MHz | QPSK | 1 RB / 0 RB Offset |
| | | 23173 | | | 1 RB / 5 RB Offset |
| | | 23017, 23173 | | | 6 RB / 0 RB Offset |
| | 23025 to 23165 | 23025 | 3MHz | QPSK | 1 RB / 0 RB Offset |
| | | 23165 | | | 1 RB / 14 RB Offset |
| | | 23025, 23165 | | | 15 RB / 0 RB Offset |
| | 23035 to 23155 | 23035 | 5MHz | QPSK | 1 RB / 0 RB Offset |
| | | 23155 | | | 1 RB / 24 RB Offset |
| | | 23035, 23155 | | | 25 RB / 0 RB Offset |
| | 23060 to 23130 | 23060 | 10MHz | QPSK | 1 RB / 0 RB Offset |
| | | 23130 | | | 1 RB / 49 RB Offset |
| | | 23060, 23130 | | | 50 RB / 0 RB Offset |
| Conducted Emission | 23017 to 23173 | 23017, 23095, 23173 | 1.4MHz | QPSK | 1RB / 0 RB offset |
| | 23025 to 23165 | 23025, 23095, 23165 | 3MHz | QPSK | 1RB / 0 RB offset |
| | 23035 to 23155 | 23035, 23095, 23155 | 5MHz | QPSK | 1RB / 0 RB offset |
| | 23060 to 23130 | 23060, 23095, 23130 | 10MHz | QPSK | 1RB / 0 RB offset |
| Radiated Emission | 23017 to 23173 | 23017, 23095, 23173 | 1.4MHz | QPSK | 1RB / 0 RB offset |
| | 23025 to 23165 | 23025, 23095, 23165 | 3MHz | QPSK | 1RB / 0 RB offset |
| | 23035 to 23155 | 23035, 23095, 23155 | 5MHz | QPSK | 1RB / 0 RB offset |
| | 23060 to 23130 | 23060, 23095, 23130 | 10MHz | QPSK | 1RB / 0 RB offset |

LTE Band 13

| TEST ITEM | AVAILABLE CHANNEL | TESTED CHANNEL | CHANNEL BANDWIDTH | MODULATION | MODE |
|-----------------------|-------------------|---------------------|-------------------|------------------|---------------------|
| EIRP | 23205 to 23255 | 23205, 23230, 23255 | 5MHz | QPSK/16QAM/64QAM | 1RB / 0 RB offset |
| | 23230 | 23230 | 10MHz | QPSK/16QAM/64QAM | 1RB / 0 RB offset |
| Frequency Stability | 23205 to 23255 | 23230 | 5MHz | QPSK | - |
| | 23230 | 23230 | 10MHz | QPSK | - |
| Occupied Bandwidth | 23205 to 23255 | 23205, 23230, 23255 | 5MHz | QPSK/16QAM/64QAM | Full RB |
| | 23230 | 23230 | 10MHz | QPSK/16QAM/64QAM | Full RB |
| Peak to Average Ratio | 23205 to 23255 | 23205, 23230, 23255 | 5MHz | QPSK/16QAM/64QAM | Full RB |
| | 23230 | 23230 | 10MHz | QPSK/16QAM/64QAM | Full RB |
| Band Edge | 23205 to 23255 | 23205 | 5MHz | QPSK | 1 RB / 0 RB Offset |
| | | 23255 | | | 1 RB / 24 RB Offset |
| | | 23205, 23255 | | | 25 RB / 0 RB Offset |
| | 23230 | 23230 | 10MHz | QPSK | 1 RB / 0 RB Offset |
| | | | | | 1 RB / 49 RB Offset |
| | | | | | 50 RB / 0 RB Offset |
| Conducted Emission | 23205 to 23255 | 23205, 23230, 23255 | 5MHz | QPSK | 1RB / 0 RB offset |
| | 23230 | 23230 | 10MHz | QPSK | 1RB / 0 RB offset |
| Radiated Emission | 23205 to 23255 | 23205, 23230, 23255 | 5MHz | QPSK | 1RB / 0 RB offset |
| | 23230 | 23230 | 10MHz | QPSK | 1RB / 0 RB offset |

LTE Band 17

| TEST ITEM | AVAILABLE CHANNEL | TESTED CHANNEL | CHANNEL BANDWIDTH | MODULATION | MODE |
|-----------------------|-------------------|---------------------|-------------------|------------------|---------------------|
| EIRP | 23755 to 23825 | 23755, 23790, 23825 | 5MHz | QPSK/16QAM/64QAM | 1RB / 0 RB offset |
| | 23780 to 23800 | 23780, 23790, 23800 | 10MHz | QPSK/16QAM/64QAM | 1RB / 0 RB offset |
| Frequency Stability | 23755 to 23825 | 23790 | 5MHz | QPSK | - |
| | 23780 to 23800 | 23790 | 10MHz | QPSK | - |
| Occupied Bandwidth | 23755 to 23825 | 23755, 23790, 23825 | 5MHz | QPSK/16QAM/64QAM | 25 RB / 0 RB Offset |
| | 23780 to 23800 | 23780, 23790, 23800 | 10MHz | QPSK/16QAM/64QAM | 50 RB / 0 RB Offset |
| Peak to Average Ratio | 23755 to 23825 | 23755, 23790, 23825 | 5MHz | QPSK/16QAM/64QAM | 25 RB / 0 RB Offset |
| | 23780 to 23800 | 23780, 23790, 23800 | 10MHz | QPSK/16QAM/64QAM | 50 RB / 0 RB Offset |
| Band Edge | 23755 to 23825 | 23755 | 5MHz | QPSK | 1 RB / 0 RB Offset |
| | | 23825 | | | 1 RB / 24 RB Offset |
| | | 23755, 23825 | | | 25 RB / 0 RB Offset |
| | 23780 to 23800 | 23780 | 10MHz | QPSK | 1 RB / 0 RB Offset |
| | | 23825 | | | 1 RB / 49 RB Offset |
| | | 23755, 23825 | | | 50 RB / 0 RB Offset |
| Conducted Emission | 23755 to 23825 | 23755, 23790, 23825 | 5MHz | QPSK | 1RB / 0 RB offset |
| | 23780 to 23800 | 23780, 23790, 23800 | 10MHz | QPSK | 1RB / 0 RB offset |
| Radiated Emission | 23755 to 23825 | 23755, 23790, 23825 | 5MHz | QPSK | 1RB / 0 RB offset |
| | 23780 to 23800 | 23780, 23790, 23800 | 10MHz | QPSK | 1RB / 0 RB offset |

LTE Band 30

| TEST ITEM | AVAILABLE CHANNEL | TESTED CHANNEL | CHANNEL BANDWIDTH | MODULATION | MODE |
|-----------------------|-------------------|---------------------|-------------------|------------------|---------------------|
| EIRP | 27685 to 27735 | 27685, 27710, 27735 | 5MHz | QPSK/16QAM/64QAM | 1RB / 0 RB offset |
| | 27710 to 27710 | 27710 | 10MHz | QPSK/16QAM/64QAM | 1RB / 0 RB offset |
| Frequency Stability | 27685 to 27735 | 27710 | 5MHz | QPSK | - |
| | 27710 to 27710 | 27710 | 10MHz | QPSK | - |
| Occupied Bandwidth | 27685 to 27735 | 27685, 27710, 27735 | 5MHz | QPSK/16QAM/64QAM | 25 RB / 0 RB Offset |
| | 27710 to 27710 | 27710 | 10MHz | QPSK/16QAM/64QAM | 50 RB / 0 RB Offset |
| Peak to Average Ratio | 27685 to 27735 | 27685, 27710, 27735 | 5MHz | QPSK/16QAM/64QAM | 25 RB / 0 RB Offset |
| | 27710 to 27710 | 27710 | 10MHz | QPSK/16QAM/64QAM | 50 RB / 0 RB Offset |
| Band Edge | 27685 to 27735 | 27685 | 5MHz | QPSK | 1 RB / 0 RB Offset |
| | | 27735 | | | 1 RB / 24 RB Offset |
| | | 27685, 27735 | | | 25 RB / 0 RB Offset |
| | 27710 to 27710 | 27710 | 10MHz | QPSK | 1 RB / 0 RB Offset |
| | | | | | 1 RB / 49 RB Offset |
| | | | | | 50 RB / 0 RB Offset |
| Conducted Emission | 27685 to 27735 | 27685, 27710, 27735 | 5MHz | QPSK | 1RB / 0 RB offset |
| | 27710 to 27710 | 27710 | 10MHz | QPSK | 1RB / 0 RB offset |
| Radiated Emission | 27685 to 27735 | 27685, 27710, 27735 | 5MHz | QPSK | 1RB / 0 RB offset |
| | 27710 to 27710 | 27710 | 10MHz | QPSK | 1RB / 0 RB offset |

LTE Band 38

| TEST ITEM | AVAILABLE CHANNEL | TESTED CHANNEL | CHANNEL BANDWIDTH | MODULATION | MODE |
|-----------------------|-------------------|---------------------|-------------------|------------------|----------------------|
| EIRP | 37775 to 38225 | 37775, 38000, 38225 | 5MHz | QPSK/16QAM/64QAM | 1RB / 0 RB offset |
| | 37800 to 38200 | 37800, 38000, 38200 | 10MHz | QPSK/16QAM/64QAM | 1RB / 0 RB offset |
| | 37825 to 38175 | 37825, 38000, 38175 | 15MHz | QPSK/16QAM/64QAM | 1RB / 0 RB offset |
| | 37850 to 38150 | 37850, 38000, 38150 | 20MHz | QPSK/16QAM/64QAM | 1RB / 0 RB offset |
| Frequency Stability | 37775 to 38225 | 38000 | 5MHz | QPSK | - |
| | 37800 to 38200 | 38000 | 10MHz | QPSK | - |
| | 37825 to 38175 | 38000 | 15MHz | QPSK | - |
| | 37850 to 38150 | 38000 | 20MHz | QPSK | - |
| Occupied Bandwidth | 37775 to 38225 | 37775, 38000, 38225 | 5MHz | QPSK/16QAM/64QAM | Full RB |
| | 37800 to 38200 | 37800, 38000, 38200 | 10MHz | QPSK/16QAM/64QAM | Full RB |
| | 37825 to 38175 | 37825, 38000, 38175 | 15MHz | QPSK/16QAM/64QAM | Full RB |
| | 37850 to 38150 | 37850, 38000, 38150 | 20MHz | QPSK/16QAM/64QAM | Full RB |
| Peak to Average Ratio | 37775 to 38225 | 37775, 38000, 38225 | 5MHz | QPSK/16QAM/64QAM | Full RB |
| | 37800 to 38200 | 37800, 38000, 38200 | 10MHz | QPSK/16QAM/64QAM | Full RB |
| | 37825 to 38175 | 37825, 38000, 38175 | 15MHz | QPSK/16QAM/64QAM | Full RB |
| | 37850 to 38150 | 37850, 38000, 38150 | 20MHz | QPSK/16QAM/64QAM | Full RB |
| Band Edge | 37775 to 38225 | 37775 | 5MHz | QPSK | 1 RB / 0 RB Offset |
| | | 38225 | | | 1 RB / 24 RB Offset |
| | | 37775, 38225 | | | 25 RB / 0 RB Offset |
| | 37800 to 38200 | 37800 | 10MHz | QPSK | 1 RB / 0 RB Offset |
| | | 38200 | | | 1 RB / 49 RB Offset |
| | | 37800, 38200 | | | 50 RB / 0 RB Offset |
| | 37825 to 38175 | 37825 | 15MHz | QPSK | 1 RB / 0 RB Offset |
| | | 38175 | | | 1 RB / 74 RB Offset |
| | | 37825, 38175 | | | 75 RB / 0 RB Offset |
| | 37850 to 38150 | 37850 | 20MHz | QPSK | 1 RB / 0 RB Offset |
| | | 38150 | | | 1 RB / 99 RB Offset |
| | | 37850, 38150 | | | 100 RB / 0 RB Offset |
| Conducted Emission | 37775 to 38225 | 37775, 38000, 38225 | 5MHz | QPSK | 1 RB / 0 RB Offset |
| | 37800 to 38200 | 37800, 38000, 38200 | 10MHz | QPSK | 1 RB / 0 RB Offset |
| | 37825 to 38175 | 37825, 38000, 38175 | 15MHz | QPSK | 1 RB / 0 RB Offset |
| | 37850 to 38150 | 37850, 38000, 38150 | 20MHz | QPSK | 1 RB / 0 RB Offset |
| Radiated Emission | 37775 to 38225 | 37775, 38000, 38225 | 5MHz | QPSK | 1 RB / 0 RB Offset |
| | 37800 to 38200 | 37800, 38000, 38200 | 10MHz | QPSK | 1 RB / 0 RB Offset |
| | 37825 to 38175 | 37825, 38000, 38175 | 15MHz | QPSK | 1 RB / 0 RB Offset |
| | 37850 to 38150 | 37850, 38000, 38150 | 20MHz | QPSK | 1 RB / 0 RB Offset |

LTE CA_38C

| TEST ITEM | MODULATION | PCC | | | SCC | | |
|-----------------------|------------|-------------------|----------------|--------------------|-------------------|----------------|--------------------|
| | | CHANNEL BANDWIDTH | TESTED CHANNEL | MODE | CHANNEL BANDWIDTH | TESTED CHANNEL | MODE |
| EIRP | QPSK | 15MHz | 38000 | 1RB / 0 RB offset | 15MHz | 38150 | 0RB / 0 RB offset |
| Frequency Stability | QPSK | 15MHz | 38000 | - | 15MHz | 38150 | - |
| Occupied Bandwidth | QPSK | 15MHz | 38000 | 75RB / 0 RB offset | 15MHz | 38150 | 75RB / 0 RB offset |
| Peak to Average Ratio | QPSK | 15MHz | 38000 | 75RB / 0 RB offset | 15MHz | 38150 | 75RB / 0 RB offset |
| Band Edge | QPSK | 15MHz | 37825 | 75RB / 0 RB offset | 15MHz | 37975 | 75RB / 0 RB offset |
| | | | | 1RB / 0 RB offset | | | 0RB / 0 RB offset |
| | | | 38025 | 75RB / 0 RB offset | | 38175 | 75RB / 0 RB offset |
| | | | | 0RB / 0 RB offset | | | 1RB / 74 RB offset |
| Conducted Emission | QPSK | 15MHz | 38000 | 1RB / 0 RB offset | 15MHz | 38150 | 0RB / 0 RB offset |
| Radiated Emission | QPSK | 15MHz | 38000 | 1RB / 0 RB offset | 15MHz | 38150 | 0RB / 0 RB offset |

Note: This product supports multiple carriers in intra-band contiguous spectrum operation, therefore test mode and test configurations follow KDB inquiry (more detail information refer "Operation Description.pdf").

LTE Band 41

| TEST ITEM | AVAILABLE CHANNEL | TESTED CHANNEL | CHANNEL BANDWIDTH | MODULATION | MODE |
|-----------------------|-------------------|---------------------|-------------------|------------------|----------------------|
| EIRP | 39675 to 41565 | 39675, 40620, 41565 | 5MHz | QPSK/16QAM/64QAM | 1RB / 0 RB offset |
| | 39700 to 41540 | 39700, 40620, 41540 | 10MHz | QPSK/16QAM/64QAM | 1RB / 0 RB offset |
| | 39725 to 41515 | 39725, 40620, 41515 | 15MHz | QPSK/16QAM/64QAM | 1RB / 0 RB offset |
| | 39750 to 41490 | 39750, 40620, 41490 | 20MHz | QPSK/16QAM/64QAM | 1RB / 0 RB offset |
| Frequency Stability | 39675 to 41565 | 40620 | 5MHz | QPSK | - |
| | 39700 to 41540 | 40620 | 10MHz | QPSK | - |
| | 39725 to 41515 | 40620 | 15MHz | QPSK | - |
| | 39750 to 41490 | 40620 | 20MHz | QPSK | - |
| Occupied Bandwidth | 39675 to 41565 | 39675, 40620, 41565 | 5MHz | QPSK/16QAM/64QAM | Full RB |
| | 39700 to 41540 | 39700, 40620, 41540 | 10MHz | QPSK/16QAM/64QAM | Full RB |
| | 39725 to 41515 | 39725, 40620, 41515 | 15MHz | QPSK/16QAM/64QAM | Full RB |
| | 39750 to 41490 | 39750, 40620, 41490 | 20MHz | QPSK/16QAM/64QAM | Full RB |
| Peak to Average Ratio | 39675 to 41565 | 39675, 40620, 41565 | 5MHz | QPSK/16QAM/64QAM | Full RB |
| | 39700 to 41540 | 39700, 40620, 41540 | 10MHz | QPSK/16QAM/64QAM | Full RB |
| | 39725 to 41515 | 39725, 40620, 41515 | 15MHz | QPSK/16QAM/64QAM | Full RB |
| | 39750 to 41490 | 39750, 40620, 41490 | 20MHz | QPSK/16QAM/64QAM | Full RB |
| Band Edge | 39675 to 41565 | 39675 | 5MHz | QPSK | 1 RB / 0 RB Offset |
| | | 41565 | | | 1 RB / 24 RB Offset |
| | | 39675, 41565 | | | 25 RB / 0 RB Offset |
| | 39700 to 41540 | 39700 | 10MHz | QPSK | 1 RB / 0 RB Offset |
| | | 41540 | | | 1 RB / 49 RB Offset |
| | | 39700, 41540 | | | 50 RB / 0 RB Offset |
| | 39725 to 41515 | 39725 | 15MHz | QPSK | 1 RB / 0 RB Offset |
| | | 41515 | | | 1 RB / 74 RB Offset |
| | | 39725, 41515 | | | 75 RB / 0 RB Offset |
| | 39750 to 41490 | 39750 | 20MHz | QPSK | 1 RB / 0 RB Offset |
| | | 41490 | | | 1 RB / 99 RB Offset |
| | | 39750, 41490 | | | 100 RB / 0 RB Offset |
| Conducted Emission | 39675 to 41565 | 39675, 40620, 41565 | 5MHz | QPSK | 1 RB / 0 RB Offset |
| | 39700 to 41540 | 39700, 40620, 41540 | 10MHz | QPSK | 1 RB / 0 RB Offset |
| | 39725 to 41515 | 39725, 40620, 41515 | 15MHz | QPSK | 1 RB / 0 RB Offset |
| | 39750 to 41490 | 39750, 40620, 41490 | 20MHz | QPSK | 1 RB / 0 RB Offset |
| Radiated Emission | 39675 to 41565 | 39675, 40620, 41565 | 5MHz | QPSK | 1 RB / 0 RB Offset |
| | 39700 to 41540 | 39700, 40620, 41540 | 10MHz | QPSK | 1 RB / 0 RB Offset |
| | 39725 to 41515 | 39725, 40620, 41515 | 15MHz | QPSK | 1 RB / 0 RB Offset |
| | 39750 to 41490 | 39750, 40620, 41490 | 20MHz | QPSK | 1 RB / 0 RB Offset |

LTE CA 41C

| TEST ITEM | MODULATION | PCC | | | SCC | | |
|-----------------------|------------|-------------------|----------------|--------------------|-------------------|----------------|--------------------|
| | | CHANNEL BANDWIDTH | TESTED CHANNEL | MODE | CHANNEL BANDWIDTH | TESTED CHANNEL | MODE |
| EIRP | QPSK | 10MHz | 40620 | 0RB / 0 RB offset | 5MHz | 40692 | 1RB / 24 RB offset |
| Frequency Stability | QPSK | 10MHz | 40620 | - | 5MHz | 40692 | - |
| Occupied Bandwidth | QPSK | 10MHz | 40620 | 50RB / 0 RB offset | 5MHz | 40692 | 25RB / 0 RB offset |
| Peak to Average Ratio | QPSK | 10MHz | 40620 | 50RB / 0 RB offset | 5MHz | 40692 | 25RB / 0 RB offset |
| Band Edge | QPSK | 10MHz | 39700 | 50RB / 0 RB offset | 5MHz | 39772 | 25RB / 0 RB offset |
| | | | | 1RB / 0 RB offset | | | 0RB / 0 RB offset |
| | | | 41493 | 50RB / 0 RB offset | | 41565 | 25RB / 0 RB offset |
| | | | | 0RB / 0 RB offset | | | 1RB / 24 RB offset |
| Conducted Emission | QPSK | 10MHz | 40620 | 0RB / 0 RB offset | 5MHz | 40692 | 1RB / 24 RB offset |
| Radiated Emission | QPSK | 10MHz | 40620 | 0RB / 0 RB offset | 5MHz | 40692 | 1RB / 24 RB offset |

Note: This product supports multiple carriers in intra-band contiguous spectrum operation, therefore test mode and test configurations follow KDB inquiry (more detail information refer "Operation Description.pdf").

LTE Band 66

| TEST ITEM | AVAILABLE CHANNEL | TESTED CHANNEL | CHANNEL BANDWIDTH | MODULATION | MODE |
|-----------------------|-------------------|------------------------|-------------------|------------------|----------------------|
| EIRP | 131979 to 132665 | 131979, 132322, 132665 | 1.4MHz | QPSK/16QAM/64QAM | 1RB / 0 RB offset |
| | 131987 to 132657 | 131987, 132322, 132657 | 3MHz | QPSK/16QAM/64QAM | 1RB / 0 RB offset |
| | 131997 to 132647 | 131997, 132322, 132647 | 5MHz | QPSK/16QAM/64QAM | 1RB / 0 RB offset |
| | 132022 to 132622 | 132022, 132322, 132622 | 10MHz | QPSK/16QAM/64QAM | 1RB / 0 RB offset |
| | 132047 to 132597 | 132047, 132322, 132597 | 15MHz | QPSK/16QAM/64QAM | 1RB / 0 RB offset |
| | 132072 to 132572 | 132072, 132322, 132572 | 20MHz | QPSK/16QAM/64QAM | 1RB / 0 RB offset |
| Frequency Stability | 131979 to 132665 | 132322 | 1.4MHz | QPSK | - |
| | 131987 to 132657 | 132322 | 3MHz | QPSK | - |
| | 131997 to 132647 | 132322 | 5MHz | QPSK | - |
| | 132022 to 132622 | 132322 | 10MHz | QPSK | - |
| | 132047 to 132597 | 132322 | 15MHz | QPSK | - |
| | 132072 to 132572 | 132322 | 20MHz | QPSK | - |
| Occupied Bandwidth | 131979 to 132665 | 131979, 132322, 132665 | 1.4MHz | QPSK/16QAM/64QAM | Full RB |
| | 131987 to 132657 | 131987, 132322, 132657 | 3MHz | QPSK/16QAM/64QAM | Full RB |
| | 131997 to 132647 | 131997, 132322, 132647 | 5MHz | QPSK/16QAM/64QAM | Full RB |
| | 132022 to 132622 | 132022, 132322, 132622 | 10MHz | QPSK/16QAM/64QAM | Full RB |
| | 132047 to 132597 | 132047, 132322, 132597 | 15MHz | QPSK/16QAM/64QAM | Full RB |
| | 132072 to 132572 | 132072, 132322, 132572 | 20MHz | QPSK/16QAM/64QAM | Full RB |
| Peak to Average Ratio | 131979 to 132665 | 131979, 132322, 132665 | 1.4MHz | QPSK/16QAM/64QAM | Full RB |
| | 131987 to 132657 | 131987, 132322, 132657 | 3MHz | QPSK/16QAM/64QAM | Full RB |
| | 131997 to 132647 | 131997, 132322, 132647 | 5MHz | QPSK/16QAM/64QAM | Full RB |
| | 132022 to 132622 | 132022, 132322, 132622 | 10MHz | QPSK/16QAM/64QAM | Full RB |
| | 132047 to 132597 | 132047, 132322, 132597 | 15MHz | QPSK/16QAM/64QAM | Full RB |
| | 132072 to 132572 | 132072, 132322, 132572 | 20MHz | QPSK/16QAM/64QAM | Full RB |
| Band Edge | 131979 to 132665 | 131979 | 1.4MHz | QPSK | 1 RB / 0 RB Offset |
| | | 132665 | | | 1 RB / 5 RB Offset |
| | | 131979, 132665 | | | 6 RB / 0 RB Offset |
| | 131987 to 132657 | 131987 | 3MHz | QPSK | 1 RB / 0 RB Offset |
| | | 132657 | | | 1 RB / 14 RB Offset |
| | | 131987, 132657 | | | 15 RB / 0 RB Offset |
| | 131997 to 132647 | 131997 | 5MHz | QPSK | 1 RB / 0 RB Offset |
| | | 132647 | | | 1 RB / 24 RB Offset |
| | | 131997, 132647 | | | 25 RB / 0 RB Offset |
| | 132022 to 132622 | 132022 | 10MHz | QPSK | 1 RB / 0 RB Offset |
| | | 132622 | | | 1 RB / 49 RB Offset |
| | | 132022, 132622 | | | 50 RB / 0 RB Offset |
| | 132047 to 132597 | 132047 | 15MHz | QPSK | 1 RB / 0 RB Offset |
| | | 132597 | | | 1 RB / 74 RB Offset |
| | | 132047, 132597 | | | 75 RB / 0 RB Offset |
| | 132072 to 132572 | 132072 | 20MHz | QPSK | 1 RB / 0 RB Offset |
| | | 132572 | | | 1 RB / 99 RB Offset |
| | | 132072, 132572 | | | 100 RB / 0 RB Offset |

| | | | | | |
|--------------------|------------------|------------------------|--------|------|--------------------|
| Conducted Emission | 131979 to 132665 | 131979, 132322, 132665 | 1.4MHz | QPSK | 1 RB / 0 RB Offset |
| | 131987 to 132657 | 131987, 132322, 132657 | 3MHz | QPSK | 1 RB / 0 RB Offset |
| | 131997 to 132647 | 131997, 132322, 132647 | 5MHz | QPSK | 1 RB / 0 RB Offset |
| | 132022 to 132622 | 132022, 132322, 132622 | 10MHz | QPSK | 1 RB / 0 RB Offset |
| | 132047 to 132597 | 132047, 132322, 132597 | 15MHz | QPSK | 1 RB / 0 RB Offset |
| | 132072 to 132572 | 132072, 132322, 132572 | 20MHz | QPSK | 1 RB / 0 RB Offset |
| Radiated Emission | 131979 to 132665 | 131979, 132322, 132665 | 1.4MHz | QPSK | 1 RB / 0 RB Offset |
| | 131987 to 132657 | 131987, 132322, 132657 | 3MHz | QPSK | 1 RB / 0 RB Offset |
| | 131997 to 132647 | 131997, 132322, 132647 | 5MHz | QPSK | 1 RB / 0 RB Offset |
| | 132022 to 132622 | 132022, 132322, 132622 | 10MHz | QPSK | 1 RB / 0 RB Offset |
| | 132047 to 132597 | 132047, 132322, 132597 | 15MHz | QPSK | 1 RB / 0 RB Offset |
| | 132072 to 132572 | 132072, 132322, 132572 | 20MHz | QPSK | 1 RB / 0 RB Offset |

NOTE:

All supported modulation types were evaluated. The Worst case of QPSK was selected. Therefore, the Frequency Stability, Band Edge, Condcudeted Emission and Radiated Emission were presented under QPSK mode only.

Test Condition:

| Test Item | Environmental Conditions | Input Power (System) | Tested By |
|---------------------------------|--------------------------|----------------------|--------------|
| EIRP | 25deg. C, 60%RH | 120Vac, 60Hz | Jynuchun Lin |
| Frequency Stability | 25deg. C, 60%RH | 120Vac, 60Hz | Jynuchun Lin |
| Occupied Bandwidth | 25deg. C, 60%RH | 120Vac, 60Hz | Jynuchun Lin |
| Band Edge | 25deg. C, 60%RH | 120Vac, 60Hz | Jynuchun Lin |
| Peak to Average Ratio | 25deg. C, 60%RH | 120Vac, 60Hz | Jynuchun Lin |
| Conducuted Emission | 25deg. C, 60%RH | 120Vac, 60Hz | Jynuchun Lin |
| Radiated Emission Below 1GHz | 25deg. C, 75%RH | 120Vac, 60Hz | James Chan |
| Radiated Emission Above 1GHz | 25deg. C, 75%RH | 120Vac, 60Hz | James Chan |

3.4 EUT Operating Conditions

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

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

FCC 47 CFR Part 2

FCC 47 CFR Part 27, Subpart D / F / H / L / M

KDB 971168 D01 Power Meas License Digital Systems v03r01

ANSI/TIA/EIA-603-E 2016

ANSI 63.26-2015

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

4 Test Types and Results

4.1 Output Power Measurement

4.1.1 Limits of Output Power Measurement

For section 27.50(d)(4): Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP.

For section 27.50(b)(10): Portable stations (hand-held devices) operating in the 698-787 MHz band are limited to 3 watts ERP. In the BRS and EBS Band, Mobile and other user stations are limited to 2.0 watts EIRP.

For section 27.50(h)(2): In the BRS and EBS: Mobile and other user stations. Mobile stations are limited to 2.0 watts EIRP. All user stations are limited to 2.0 watts transmitter output power.

For section 27.50 (c)(10): 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 band are limited to 3 watts ERP.

For section 27.50(a)(3): For mobile and portable stations transmitting in the 2305-2315 MHz band or the 2350-2360 MHz band, the average EIRP must not exceed 50 milliwatts within any 1 megahertz of authorized bandwidth, except that for mobile and portable stations compliant with 3GPP LTE standards or another advanced mobile broadband protocol that avoids concentrating energy at the edge of the operating band the average EIRP must not exceed 250 milliwatts within any 5 megahertz of authorized bandwidth but may exceed 50 milliwatts within any 1 megahertz of authorized bandwidth. For mobile and portable stations using time division duplexing (TDD) technology, the duty cycle must not exceed 38 percent in the 2305-2315 MHz and 2350-2360 MHz bands. Mobile and portable stations using FDD technology are restricted to transmitting in the 2305-2315 MHz band. Power averaging shall not include intervals in which the transmitter is off.

4.1.2 Test Procedures

Conducted Power Measurement:

The EUT was set up for the maximum power with WCDMA/LTE link data modulation and link up with simulator. Set the EUT to transmit under low, middle and high channel and difference RB size/ RB offset for difference bandwidth record the power level shown on power meter.

EIRP / ERP Measurement:

- a. $EIRP = \text{Conducted Output power level} + \text{Antenna gain}$.
- b. ERP power can be calculated from EIRP power by subtracting the gain of dipole, $ERP \text{ power} = EIRP \text{ power} - 2.15\text{dBi}$.
- c. $ERP = \text{Conducted Output power level} + \text{Antenna gain (dBi)} - \text{Isotropically Factor (2.15dB)}$

EIRP Power Density Measurement (For LTE Band 30):

- a. The power was measured with Spectrum Analyzer.
- b. Substitution method is used for EIRP measurement. In the semi-anechoic chamber, EUT placed on the 0.8m/1.5m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
- c. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = Read Value (dB μ V/m) - Correction Factor @ 3M
- d. Correction Factor (dB) @ 3M = $20\log(D) - 104.8$; where D is the measurement distance @3m = -95.26dB

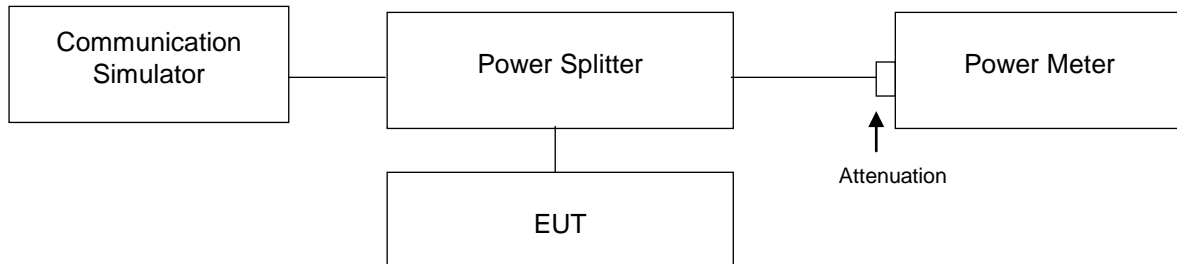
The testing follows FCC KDB 971168 v03r01 Section 5.4.

1. Set the analyzer center frequency to the OBW center frequency.
2. Set the span to 2x to 3x times the OBW bandwidth.
3. Set the RBW to 1% to 5% of the OBW.
4. Set the VBW $\geq 3 \times$ RBW.
5. Set the number of points in sweep $\geq 2 \times$ span / RBW.
6. Detector = power averaging (rms).
7. Sweep time = auto couple.
8. Trace mode = Trace average at least 100 traces in power averaging (rms) mode.
9. Allow trace to fully stabilize.
10. Use the integral function to determine the maximum amplitude level within the specified reference bandwidth (PSD).

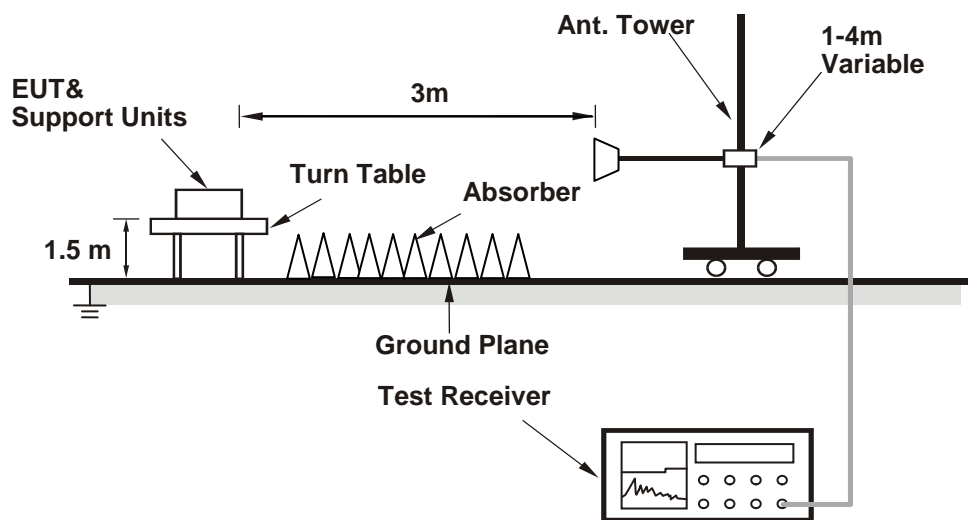
Note: The worst case vertical or horizontal polarization have been investigated and reported in this report

4.1.3 Test Setup

Conducted Power Measurement:



EIRP Power Density Measurement:



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

4.1.4 Test Results

CONDUCTED OUTPUT POWER (dBm)

| Band | WCDMA B4 | | |
|-----------------|----------|--------|--------|
| | 1312 | 1413 | 1513 |
| Channel | 1712.4 | 1732.6 | 1752.6 |
| Frequency (MHz) | 23.64 | 23.72 | 23.99 |
| RMC | 22.95 | 23.08 | 23.11 |
| HSDPA Subtest-1 | 23.59 | 23.50 | 23.15 |
| HSDPA Subtest-2 | 23.39 | 23.40 | 23.11 |
| HSDPA Subtest-3 | 23.36 | 23.03 | 23.29 |
| HSDPA Subtest-4 | 23.30 | 22.94 | 22.85 |
| HSUPA Subtest-1 | 23.58 | 23.13 | 23.50 |
| HSUPA Subtest-2 | 23.50 | 23.14 | 23.09 |
| HSUPA Subtest-3 | 23.11 | 23.33 | 22.83 |
| HSUPA Subtest-4 | 23.65 | 23.32 | 23.50 |
| HSUPA Subtest-5 | | | |

LTE Band 4

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|-----------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 19957 | 20175 | 20393 | | 19957 | 20175 | 20393 | | 19957 | 20175 | 20393 | |
| | | | 1710.7 | 1732.5 | 1754.3 | | 1710.7 | 1732.5 | 1754.3 | | 1710.7 | 1732.5 | 1754.3 | |
| | | | MHz | MHz | MHz | | | | MHz | MHz | MHz | | | |
| 4 / 1.4M | 1 | 0 | 23.89 | 23.67 | 23.29 | 0 | 22.20 | 22.73 | 22.41 | 1 | 21.44 | 21.40 | 21.28 | 2 |
| | 1 | 2 | 23.34 | 23.45 | 23.30 | 0 | 22.42 | 22.62 | 22.48 | 1 | 21.42 | 21.29 | 21.52 | 2 |
| | 1 | 5 | 23.45 | 23.45 | 23.76 | 0 | 22.13 | 22.83 | 22.25 | 1 | 21.46 | 21.50 | 21.54 | 2 |
| | 3 | 0 | 23.50 | 23.69 | 23.60 | 0 | 22.40 | 22.72 | 22.64 | 1 | 21.28 | 21.30 | 21.23 | 2 |
| | 3 | 1 | 23.37 | 23.88 | 23.69 | 0 | 22.19 | 22.64 | 22.64 | 1 | 21.63 | 21.43 | 21.72 | 2 |
| | 3 | 3 | 22.98 | 23.82 | 23.38 | 0 | 22.30 | 22.44 | 22.36 | 1 | 21.60 | 21.49 | 21.56 | 2 |
| | 6 | 0 | 22.30 | 22.59 | 22.61 | 1 | 21.13 | 21.84 | 21.29 | 2 | 20.62 | 20.48 | 20.65 | 3 |

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|-----------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 19965 | 20175 | 20385 | | 19965 | 20175 | 20385 | | 19965 | 20175 | 20385 | |
| | | | 1711.5 | 1732.5 | 1753.5 | | 1711.5 | 1732.5 | 1753.5 | | 1711.5 | 1732.5 | 1753.5 | |
| | | | MHz | MHz | MHz | | | | MHz | MHz | MHz | | | |
| 4 / 3M | 1 | 0 | 23.38 | 23.71 | 23.56 | 0 | 22.47 | 22.71 | 22.58 | 1 | 21.60 | 21.68 | 21.45 | 2 |
| | 1 | 7 | 23.48 | 23.70 | 23.23 | 0 | 22.43 | 22.83 | 22.68 | 1 | 21.54 | 21.09 | 21.81 | 2 |
| | 1 | 14 | 23.66 | 23.62 | 23.61 | 0 | 22.58 | 22.69 | 22.45 | 1 | 21.36 | 21.55 | 21.78 | 2 |
| | 8 | 0 | 22.62 | 22.66 | 22.60 | 1 | 21.28 | 21.44 | 21.25 | 2 | 20.40 | 20.66 | 20.41 | 3 |
| | 8 | 3 | 22.36 | 22.65 | 22.27 | 1 | 21.49 | 21.49 | 21.35 | 2 | 20.08 | 20.51 | 20.65 | 3 |
| | 8 | 7 | 22.28 | 22.46 | 22.72 | 1 | 21.46 | 21.59 | 21.29 | 2 | 20.47 | 20.68 | 20.42 | 3 |
| | 15 | 0 | 22.32 | 22.37 | 22.93 | 1 | 21.34 | 21.90 | 21.49 | 2 | 20.32 | 20.76 | 20.78 | 3 |

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|-----------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 19975 | 20175 | 20375 | | 19975 | 20175 | 20375 | | 19975 | 20175 | 20375 | |
| | | | 1712.5 | 1732.5 | 1752.5 | | 1712.5 | 1732.5 | 1752.5 | | 1712.5 | 1732.5 | 1752.5 | |
| | | | MHz | MHz | MHz | | | | MHz | MHz | MHz | | | |
| 4 / 5M | 1 | 0 | 23.56 | 23.63 | 23.62 | 0 | 22.52 | 22.79 | 22.68 | 1 | 21.39 | 21.50 | 21.62 | 2 |
| | 1 | 12 | 23.40 | 23.57 | 23.34 | 0 | 22.04 | 22.35 | 22.54 | 1 | 21.43 | 21.58 | 21.67 | 2 |
| | 1 | 24 | 23.46 | 23.40 | 23.55 | 0 | 22.07 | 22.44 | 22.26 | 1 | 21.74 | 21.78 | 21.33 | 2 |
| | 12 | 0 | 22.66 | 22.53 | 22.84 | 1 | 21.20 | 21.45 | 21.70 | 2 | 20.39 | 20.38 | 20.48 | 3 |
| | 12 | 6 | 22.61 | 22.56 | 22.51 | 1 | 21.29 | 21.98 | 21.77 | 2 | 20.65 | 20.62 | 20.51 | 3 |
| | 12 | 13 | 22.42 | 22.71 | 22.55 | 1 | 21.24 | 21.87 | 21.90 | 2 | 20.50 | 20.63 | 20.72 | 3 |
| | 25 | 0 | 22.27 | 22.51 | 22.84 | 1 | 21.51 | 21.70 | 21.71 | 2 | 20.67 | 20.30 | 20.59 | 3 |

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|-----------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 20000 | 20175 | 20350 | | 20000 | 20175 | 20350 | | 20000 | 20175 | 20350 | |
| | | | 1715 | 1732.5 | 1750 | | 1715 | 1732.5 | 1750 | | 1715 | 1732.5 | 1750 | |
| | | | MHz | MHz | MHz | MHz | MHz | MHz | MHz | MHz | MHz | | | |
| 4 / 10M | 1 | 0 | 23.28 | 23.65 | 23.82 | 0 | 22.92 | 22.92 | 22.67 | 1 | 21.84 | 21.54 | 21.58 | 2 |
| | 1 | 24 | 23.67 | 23.39 | 23.81 | 0 | 22.94 | 22.83 | 22.86 | 1 | 21.48 | 21.43 | 21.48 | 2 |
| | 1 | 49 | 23.32 | 23.68 | 23.61 | 0 | 22.69 | 22.70 | 22.75 | 1 | 21.67 | 21.46 | 21.44 | 2 |
| | 25 | 0 | 22.40 | 22.78 | 22.84 | 1 | 21.91 | 21.74 | 21.48 | 2 | 20.47 | 20.60 | 20.27 | 3 |
| | 25 | 12 | 22.41 | 22.94 | 22.65 | 1 | 21.96 | 21.76 | 21.42 | 2 | 20.52 | 20.20 | 20.51 | 3 |
| | 25 | 25 | 22.74 | 22.85 | 22.91 | 1 | 21.91 | 21.61 | 21.85 | 2 | 20.59 | 20.21 | 20.51 | 3 |
| | 50 | 0 | 22.33 | 22.76 | 22.45 | 1 | 21.71 | 21.44 | 21.84 | 2 | 20.40 | 20.21 | 20.31 | 3 |

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|-----------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 20025 | 20175 | 20325 | | 20025 | 20175 | 20325 | | 20025 | 20175 | 20325 | |
| | | | 1717.5 | 1732.5 | 1747.5 | | 1717.5 | 1732.5 | 1747.5 | | 1717.5 | 1732.5 | 1747.5 | |
| | | | MHz | MHz | MHz | MHz | MHz | MHz | MHz | MHz | | | | |
| 4 / 15M | 1 | 0 | 23.52 | 23.88 | 23.59 | 0 | 22.86 | 22.89 | 22.44 | 1 | 21.32 | 21.67 | 21.80 | 2 |
| | 1 | 37 | 23.39 | 23.84 | 23.58 | 0 | 22.43 | 22.75 | 22.37 | 1 | 21.92 | 21.85 | 21.72 | 2 |
| | 1 | 74 | 23.45 | 23.86 | 23.64 | 0 | 22.50 | 22.66 | 22.71 | 1 | 21.35 | 21.86 | 21.32 | 2 |
| | 36 | 0 | 22.37 | 22.37 | 22.51 | 1 | 21.38 | 21.77 | 21.57 | 2 | 20.82 | 20.71 | 20.74 | 3 |
| | 36 | 19 | 22.33 | 22.46 | 22.66 | 1 | 21.66 | 21.36 | 21.70 | 2 | 20.84 | 20.79 | 20.74 | 3 |
| | 36 | 39 | 22.50 | 22.41 | 22.62 | 1 | 21.69 | 21.30 | 21.57 | 2 | 20.43 | 20.43 | 20.56 | 3 |
| | 75 | 0 | 22.96 | 22.28 | 22.59 | 1 | 21.83 | 21.72 | 21.61 | 2 | 20.66 | 20.77 | 20.75 | 3 |

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|-----------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 20050 | 20175 | 20300 | | 20050 | 20175 | 20300 | | 20050 | 20175 | 20300 | |
| | | | 1720 | 1732.5 | 1745 | | 1720 | 1732.5 | 1745 | | 1720 | 1732.5 | 1745 | |
| | | | MHz | MHz | MHz | MHz | MHz | MHz | MHz | MHz | | | | |
| 4 / 20M | 1 | 0 | 23.37 | 23.86 | 23.62 | 0 | 22.41 | 22.74 | 22.68 | 1 | 21.43 | 21.46 | 21.70 | 2 |
| | 1 | 50 | 23.64 | 23.81 | 23.64 | 0 | 22.41 | 22.62 | 22.73 | 1 | 21.68 | 21.47 | 21.32 | 2 |
| | 1 | 99 | 23.66 | 23.82 | 23.65 | 0 | 22.55 | 22.73 | 22.48 | 1 | 21.55 | 21.50 | 21.84 | 2 |
| | 50 | 0 | 22.51 | 22.45 | 22.71 | 1 | 21.29 | 21.32 | 21.98 | 2 | 20.72 | 20.31 | 20.75 | 3 |
| | 50 | 25 | 22.73 | 22.65 | 22.55 | 1 | 21.69 | 21.69 | 21.66 | 2 | 20.25 | 20.29 | 20.38 | 3 |
| | 50 | 50 | 22.75 | 22.94 | 22.99 | 1 | 21.42 | 21.84 | 21.51 | 2 | 20.58 | 20.41 | 20.32 | 3 |
| | 100 | 0 | 22.42 | 23.00 | 22.55 | 1 | 21.44 | 21.46 | 22.04 | 2 | 20.48 | 20.65 | 20.41 | 3 |

LTE Band 7

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|-----------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 20775 | 21100 | 21425 | | 20775 | 21100 | 21425 | | 20775 | 21100 | 21425 | |
| | | | 2502.5 | 2535 | 2567.5 | | 2502.5 | 2535 | 2567.5 | | 2502.5 | 2535 | 2567.5 | |
| | | | MHz | MHz | MHz | | MHz | MHz | MHz | | MHz | MHz | MHz | |
| 7 / 5M | 1 | 0 | 23.49 | 23.68 | 23.26 | 0 | 22.19 | 22.17 | 22.50 | 1 | 21.02 | 21.30 | 21.57 | 2 |
| | 1 | 12 | 23.67 | 23.57 | 23.40 | 0 | 22.30 | 22.53 | 22.47 | 1 | 21.34 | 21.09 | 21.36 | 2 |
| | 1 | 24 | 23.51 | 23.66 | 23.53 | 0 | 22.19 | 22.27 | 22.28 | 1 | 21.06 | 21.16 | 21.11 | 2 |
| | 12 | 0 | 22.42 | 22.72 | 22.15 | 1 | 21.74 | 21.61 | 21.22 | 2 | 19.98 | 20.32 | 20.38 | 3 |
| | 12 | 6 | 22.37 | 22.40 | 22.16 | 1 | 20.96 | 21.48 | 20.95 | 2 | 19.92 | 20.59 | 20.20 | 3 |
| | 12 | 13 | 22.03 | 22.24 | 21.94 | 1 | 20.98 | 21.51 | 21.37 | 2 | 20.21 | 20.19 | 20.11 | 3 |
| | 25 | 0 | 21.91 | 22.29 | 21.97 | 1 | 21.47 | 21.14 | 21.15 | 2 | 20.31 | 20.07 | 20.35 | 3 |

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|-----------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 20800 | 21100 | 21400 | | 20800 | 21100 | 21400 | | 20800 | 21100 | 21400 | |
| | | | 2505 | 2535 | 2565 | | 2505 | 2535 | 2565 | | 2505 | 2535 | 2565 | |
| | | | MHz | MHz | MHz | | MHz | MHz | MHz | | MHz | MHz | MHz | |
| 7 / 10M | 1 | 0 | 23.37 | 23.81 | 23.32 | 0 | 22.40 | 22.48 | 22.45 | 1 | 21.53 | 21.62 | 21.35 | 2 |
| | 1 | 24 | 23.79 | 23.77 | 23.72 | 0 | 22.18 | 22.20 | 22.56 | 1 | 21.36 | 21.66 | 21.48 | 2 |
| | 1 | 49 | 23.71 | 23.39 | 23.52 | 0 | 22.38 | 22.16 | 22.31 | 1 | 21.21 | 21.62 | 21.65 | 2 |
| | 25 | 0 | 21.98 | 22.14 | 22.26 | 1 | 21.33 | 21.63 | 21.56 | 2 | 19.91 | 20.21 | 20.44 | 3 |
| | 25 | 12 | 22.05 | 22.17 | 21.99 | 1 | 21.64 | 21.75 | 21.43 | 2 | 20.48 | 20.30 | 20.33 | 3 |
| | 25 | 25 | 22.32 | 22.17 | 22.15 | 1 | 21.10 | 21.29 | 21.18 | 2 | 20.48 | 20.42 | 20.23 | 3 |
| | 50 | 0 | 22.04 | 22.25 | 22.41 | 1 | 21.45 | 21.38 | 21.19 | 2 | 20.09 | 20.48 | 20.46 | 3 |

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|-----------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 20825 | 21100 | 21375 | | 20825 | 21100 | 21375 | | 20825 | 21100 | 21375 | |
| | | | 2507.5 | 2535 | 2562.5 | | 2507.5 | 2535 | 2562.5 | | 2507.5 | 2535 | 2562.5 | |
| | | | MHz | MHz | MHz | | MHz | MHz | MHz | | MHz | MHz | MHz | |
| 7 / 15M | 1 | 0 | 23.67 | 23.82 | 23.62 | 0 | 22.28 | 22.63 | 22.23 | 1 | 21.50 | 21.78 | 21.28 | 2 |
| | 1 | 37 | 23.43 | 23.79 | 23.64 | 0 | 22.36 | 22.26 | 21.88 | 1 | 21.15 | 21.56 | 21.53 | 2 |
| | 1 | 74 | 23.49 | 23.30 | 23.49 | 0 | 22.40 | 22.50 | 22.49 | 1 | 21.58 | 21.45 | 21.22 | 2 |
| | 36 | 0 | 22.03 | 22.79 | 21.93 | 1 | 21.49 | 20.96 | 21.03 | 2 | 20.04 | 20.30 | 20.37 | 3 |
| | 36 | 19 | 22.45 | 22.42 | 22.32 | 1 | 21.47 | 21.72 | 21.23 | 2 | 20.22 | 20.62 | 20.32 | 3 |
| | 36 | 39 | 22.46 | 22.34 | 22.30 | 1 | 21.32 | 21.28 | 21.10 | 2 | 20.04 | 20.36 | 20.32 | 3 |
| | 75 | 0 | 22.57 | 22.50 | 22.01 | 1 | 21.48 | 21.60 | 21.20 | 2 | 20.35 | 20.52 | 20.14 | 3 |

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|-----------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 20850 | 21100 | 21350 | | 20850 | 21100 | 21350 | | 20850 | 21100 | 21350 | |
| | | | 2510 | 2535 | 2560 | | 2510 | 2535 | 2560 | | 2510 | 2535 | 2560 | |
| | | | MHz | MHz | MHz | MHz | MHz | MHz | MHz | MHz | MHz | | | |
| 7 / 20M | 1 | 0 | 23.85 | 23.32 | 23.32 | 0 | 22.34 | 22.63 | 22.29 | 1 | 21.43 | 21.52 | 21.65 | 2 |
| | 1 | 50 | 23.49 | 23.30 | 23.52 | 0 | 22.33 | 22.32 | 22.63 | 1 | 21.39 | 21.07 | 21.38 | 2 |
| | 1 | 99 | 23.80 | 23.72 | 23.44 | 0 | 22.18 | 22.24 | 22.49 | 1 | 21.36 | 21.30 | 21.39 | 2 |
| | 50 | 0 | 22.50 | 22.50 | 22.03 | 1 | 21.70 | 21.33 | 21.63 | 2 | 20.21 | 20.48 | 20.25 | 3 |
| | 50 | 25 | 22.18 | 22.40 | 22.26 | 1 | 21.39 | 21.16 | 21.51 | 2 | 20.21 | 20.32 | 20.28 | 3 |
| | 50 | 50 | 22.31 | 22.62 | 21.86 | 1 | 21.44 | 21.17 | 21.41 | 2 | 20.16 | 20.09 | 19.97 | 3 |
| | 100 | 0 | 22.00 | 22.32 | 22.27 | 1 | 21.20 | 21.44 | 21.55 | 2 | 20.19 | 20.18 | 20.10 | 3 |

LTE CA_7C (PCC/SCC: 10M+20M)

| Intra Band-Contiguous CA | | | | | | | | | | | | | | | |
|--------------------------|----------|------------|---------|-----------|------------|--------------------|------|----------|------------|---------|-----------|------------|--------------------|----------------|---|
| PCC | | | | | | | SCC | | | | | | | MPR | |
| Band | BW (MHz) | Modulation | RB Size | RB Offset | UL Channel | UL Frequency (MHz) | Band | BW (MHz) | Modulation | RB Size | RB Offset | UL Channel | UL Frequency (MHz) | MPR Level (dB) | Tx Power with UL-CA Active (dBm) Level (dB) |
| 7 | 10 | QPSK | 0 | 0 | 20800 | 2505 | 7 | 20 | QPSK | 1 | 99 | 20944 | 2519.4 | 0 | 23.49 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 0 | 22.96 |
| | | | 50 | 0 | | | | | | 0 | 0 | | | 0-1 | 21.5 |
| | | | 50 | 0 | | | | | | 100 | 0 | | | 0-2 | 20.41 |
| | | | 1 | 0 | | | | | | 1 | 99 | | | 0-8.5 | 15.21 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 19.13 |
| | | | 1 | 49 | | | | | | 1 | 0 | | | 0 | 23.43 |
| | | | 50 | 0 | | | | | | 1 | 99 | | | 0-3.5 | 16.09 |
| 7 | 10 | QPSK | 0 | 0 | 21100 | 2535 | 7 | 20 | QPSK | 1 | 99 | 21244 | 2549.4 | 0 | 23.06 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 0 | 22.55 |
| | | | 50 | 0 | | | | | | 0 | 0 | | | 2 | 22.37 |
| | | | 50 | 0 | | | | | | 100 | 0 | | | 0-2 | 20.8 |
| | | | 1 | 0 | | | | | | 1 | 99 | | | 0-8.5 | 14.72 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 19.15 |
| | | | 1 | 49 | | | | | | 1 | 0 | | | 0 | 23.11 |
| | | | 50 | 0 | | | | | | 1 | 99 | | | 0-3.5 | 18.37 |
| 7 | 10 | QPSK | 0 | 0 | 21206 | 2545.6 | 7 | 20 | QPSK | 1 | 99 | 21350 | 2560 | 0 | 22.77 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 0 | 23.03 |
| | | | 50 | 0 | | | | | | 0 | 0 | | | 0-1 | 21.5 |
| | | | 50 | 0 | | | | | | 100 | 0 | | | 0-2 | 20.82 |
| | | | 1 | 0 | | | | | | 1 | 99 | | | 0-8.5 | 14.78 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 18.66 |
| | | | 1 | 49 | | | | | | 1 | 0 | | | 0 | 23.26 |
| | | | 50 | 0 | | | | | | 1 | 99 | | | 0-3.5 | 18.39 |

LTE CA_7C (PCC/SCC: 15M+10M)

| Intra Band-Contiguous CA | | | | | | | | | | | | | | | |
|--------------------------|----------|------------|---------|-----------|------------|--------------------|------|----------|------------|---------|-----------|------------|--------------------|----------------|---|
| PCC | | | | | | | SCC | | | | | | | MPR | |
| Band | BW (MHz) | Modulation | RB Size | RB Offset | UL Channel | UL Frequency (MHz) | Band | BW (MHz) | Modulation | RB Size | RB Offset | UL Channel | UL Frequency (MHz) | MPR Level (dB) | Tx Power with UL-CA Active (dBm) Level (dB) |
| 7 | 15 | QPSK | 0 | 0 | 20825 | 2507.5 | 7 | 10 | QPSK | 1 | 49 | 20945 | 2519.5 | 0 | 22.73 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 22.65 | |
| | | | 75 | 0 | | | | | | 0 | 0 | | | 0-1 | 20.63 |
| | | | 75 | 0 | | | | | | 50 | 0 | | | 0-2 | 20.22 |
| | | | 1 | 0 | | | | | | 1 | 49 | | | 0-8.5 | 14.91 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 17.57 |
| | | | 1 | 74 | | | | | | 1 | 0 | | | 0 | 22.66 |
| | | | 75 | 0 | | | | | | 1 | 49 | | | 0-3.5 | 17.3 |
| 7 | 15 | QPSK | 0 | 0 | 21100 | 2535 | 7 | 10 | QPSK | 1 | 49 | 21220 | 2547 | 0 | 22.91 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 23.2 | |
| | | | 75 | 0 | | | | | | 0 | 0 | | | 0-1 | 21.27 |
| | | | 75 | 0 | | | | | | 50 | 0 | | | 0-2 | 20.79 |
| | | | 1 | 0 | | | | | | 1 | 49 | | | 0-8.5 | 14.87 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 17.44 |
| | | | 1 | 74 | | | | | | 1 | 0 | | | 0 | 22.54 |
| | | | 75 | 0 | | | | | | 1 | 49 | | | 0-3.5 | 18.01 |
| 7 | 15 | QPSK | 0 | 0 | 21280 | 2553 | 7 | 10 | QPSK | 1 | 49 | 21400 | 2565 | 0 | 23.16 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 22.89 | |
| | | | 75 | 0 | | | | | | 0 | 0 | | | 0-1 | 21.5 |
| | | | 75 | 0 | | | | | | 50 | 0 | | | 0-2 | 21.28 |
| | | | 1 | 0 | | | | | | 1 | 49 | | | 0-8.5 | 14.66 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 17.4 |
| | | | 1 | 74 | | | | | | 1 | 0 | | | 0 | 22.01 |
| | | | 75 | 0 | | | | | | 1 | 49 | | | 0-3.5 | 18.84 |

LTE CA_7C (PCC/SCC: 15M+15M)

| Intra Band-Contiguous CA | | | | | | | | | | | | | | | |
|--------------------------|----------|------------|---------|-----------|------------|--------------------|------|----------|------------|---------|-----------|------------|--------------------|----------------|---|
| PCC | | | | | | | SCC | | | | | | | MPR | |
| Band | BW (MHz) | Modulation | RB Size | RB Offset | UL Channel | UL Frequency (MHz) | Band | BW (MHz) | Modulation | RB Size | RB Offset | UL Channel | UL Frequency (MHz) | MPR Level (dB) | Tx Power with UL-CA Active (dBm) Level (dB) |
| 7 | 15 | QPSK | 0 | 0 | 20825 | 2507.5 | 7 | 15 | QPSK | 1 | 74 | 20975 | 2522.5 | 0 | 23.32 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 22.93 | |
| | | | 75 | 0 | | | | | | 0 | 0 | | | 0-1 | 21.67 |
| | | | 75 | 0 | | | | | | 75 | 0 | | | 0-2 | 20.57 |
| | | | 1 | 0 | | | | | | 1 | 74 | | | 0-8.5 | 14.3 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 17.74 |
| | | | 1 | 74 | | | | | | 1 | 0 | | | 0 | 22.02 |
| | | | 75 | 0 | | | | | | 1 | 74 | | | 0-3.5 | 16.68 |
| 7 | 15 | QPSK | 0 | 0 | 21100 | 2535 | 7 | 15 | QPSK | 1 | 74 | 21250 | 2550 | 0 | 23.13 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 23.09 | |
| | | | 75 | 0 | | | | | | 0 | 0 | | | 0-1 | 20.51 |
| | | | 75 | 0 | | | | | | 75 | 0 | | | 0-2 | 20.75 |
| | | | 1 | 0 | | | | | | 1 | 74 | | | 0-8.5 | 15.15 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 19.4 |
| | | | 1 | 74 | | | | | | 1 | 0 | | | 0 | 23.09 |
| | | | 75 | 0 | | | | | | 1 | 74 | | | 0-3.5 | 18.93 |
| 7 | 15 | QPSK | 0 | 0 | 21225 | 2547.5 | 7 | 15 | QPSK | 1 | 74 | 21375 | 2562.5 | 0 | 23.41 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 23.25 | |
| | | | 75 | 0 | | | | | | 0 | 0 | | | 0-1 | 22.17 |
| | | | 75 | 0 | | | | | | 75 | 0 | | | 0-2 | 21.27 |
| | | | 1 | 0 | | | | | | 1 | 74 | | | 0-8.5 | 14.55 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 18.82 |
| | | | 1 | 74 | | | | | | 1 | 0 | | | 0 | 23.05 |
| | | | 75 | 0 | | | | | | 1 | 74 | | | 0-3.5 | 18.01 |

LTE CA_7C (PCC/SCC: 15M+20M)

| Intra Band-Contiguous CA | | | | | | | | | | | | | | | |
|--------------------------|----------|------------|---------|-----------|------------|--------------------|------|----------|------------|---------|-----------|------------|--------------------|----------------|---|
| PCC | | | | | | | SCC | | | | | | | MPR | |
| Band | BW (MHz) | Modulation | RB Size | RB Offset | UL Channel | UL Frequency (MHz) | Band | BW (MHz) | Modulation | RB Size | RB Offset | UL Channel | UL Frequency (MHz) | MPR Level (dB) | Tx Power with UL-CA Active (dBm) Level (dB) |
| 7 | 15 | QPSK | 0 | 0 | 20825 | 2507.5 | 7 | 20 | QPSK | 1 | 99 | 20996 | 2524.6 | 0 | 23.29 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 22.57 | |
| | | | 75 | 0 | | | | | | 0 | 0 | | | 0-1 | 21.83 |
| | | | 75 | 0 | | | | | | 100 | 0 | | | 0-2 | 19.92 |
| | | | 1 | 0 | | | | | | 1 | 99 | | | 0-8.5 | 14.81 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 18.5 |
| | | | 1 | 74 | | | | | | 1 | 0 | | | 0 | 22.91 |
| | | | 75 | 0 | | | | | | 1 | 99 | | | 0-3.5 | 16.34 |
| 7 | 15 | QPSK | 0 | 0 | 21100 | 2535 | 7 | 20 | QPSK | 1 | 99 | 21271 | 2552.1 | 0 | 22.98 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 23.5 | |
| | | | 75 | 0 | | | | | | 0 | 0 | | | 0-1 | 22.08 |
| | | | 75 | 0 | | | | | | 100 | 0 | | | 0-2 | 20.49 |
| | | | 1 | 0 | | | | | | 1 | 99 | | | 0-8.5 | 14.84 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 19.09 |
| | | | 1 | 74 | | | | | | 1 | 0 | | | 0 | 22.62 |
| | | | 75 | 0 | | | | | | 1 | 99 | | | 0-3.5 | 18.34 |
| 7 | 15 | QPSK | 0 | 0 | 21179 | 2542.9 | 7 | 20 | QPSK | 1 | 99 | 21350 | 2560 | 0 | 22.68 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 22.74 | |
| | | | 75 | 0 | | | | | | 0 | 0 | | | 0-1 | 21.91 |
| | | | 75 | 0 | | | | | | 100 | 0 | | | 0-2 | 20.66 |
| | | | 1 | 0 | | | | | | 1 | 99 | | | 0-8.5 | 14.73 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 18.59 |
| | | | 1 | 74 | | | | | | 1 | 0 | | | 0 | 23.03 |
| | | | 75 | 0 | | | | | | 1 | 99 | | | 0-3.5 | 18.46 |

LTE CA_7C (PCC/SCC: 20M+10M)

| Intra Band-Contiguous CA | | | | | | | | | | | | | | | |
|--------------------------|----------|------------|---------|-----------|------------|--------------------|------|----------|------------|---------|-----------|------------|--------------------|----------------|---|
| PCC | | | | | | | SCC | | | | | | | MPR | |
| Band | BW (MHz) | Modulation | RB Size | RB Offset | UL Channel | UL Frequency (MHz) | Band | BW (MHz) | Modulation | RB Size | RB Offset | UL Channel | UL Frequency (MHz) | MPR Level (dB) | Tx Power with UL-CA Active (dBm) Level (dB) |
| 7 | 20 | QPSK | 0 | 0 | 20850 | 2510 | 7 | 10 | QPSK | 1 | 49 | 20994 | 2524.4 | 0 | 22.64 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 22.63 | |
| | | | 100 | 0 | | | | | | 0 | 0 | | | 0-1 | 21.09 |
| | | | 100 | 0 | | | | | | 50 | 0 | | | 0-2 | 20.41 |
| | | | 1 | 0 | | | | | | 1 | 49 | | | 0-8.5 | 14.77 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 15.49 |
| | | | 1 | 99 | | | | | | 1 | 0 | | | 0 | 23.12 |
| | | | 100 | 0 | | | | | | 1 | 49 | | | 0-3.5 | 18.2 |
| 7 | 20 | QPSK | 0 | 0 | 21100 | 2535 | 7 | 10 | QPSK | 1 | 49 | 21244 | 2549.4 | 0 | 22.83 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 22.85 | |
| | | | 100 | 0 | | | | | | 0 | 0 | | | 0-1 | 19.54 |
| | | | 100 | 0 | | | | | | 50 | 0 | | | 0-2 | 20.61 |
| | | | 1 | 0 | | | | | | 1 | 49 | | | 0-8.5 | 14.45 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 15.98 |
| | | | 1 | 99 | | | | | | 1 | 0 | | | 0 | 23.08 |
| | | | 100 | 0 | | | | | | 1 | 49 | | | 0-3.5 | 18.34 |
| 7 | 20 | QPSK | 0 | 0 | 21256 | 2550.6 | 7 | 10 | QPSK | 1 | 49 | 21400 | 2565 | 0 | 22.86 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 23.3 | |
| | | | 100 | 0 | | | | | | 0 | 0 | | | 0-1 | 20.96 |
| | | | 100 | 0 | | | | | | 50 | 0 | | | 0-2 | 21.06 |
| | | | 1 | 0 | | | | | | 1 | 49 | | | 0-8.5 | 14.67 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 15.7 |
| | | | 1 | 99 | | | | | | 1 | 0 | | | 0 | 23.25 |
| | | | 100 | 0 | | | | | | 1 | 49 | | | 0-3.5 | 18.43 |

LTE CA_7C (PCC/SCC: 20M+15M)

| Intra Band-Contiguous CA | | | | | | | | | | | | | | | |
|--------------------------|----------|------------|---------|-----------|------------|--------------------|------|----------|------------|---------|-----------|------------|--------------------|----------------|---|
| PCC | | | | | | | SCC | | | | | | | MPR | |
| Band | BW (MHz) | Modulation | RB Size | RB Offset | UL Channel | UL Frequency (MHz) | Band | BW (MHz) | Modulation | RB Size | RB Offset | UL Channel | UL Frequency (MHz) | MPR Level (dB) | Tx Power with UL-CA Active (dBm) Level (dB) |
| 7 | 20 | QPSK | 0 | 0 | 20850 | 2510 | 7 | 15 | QPSK | 1 | 74 | 21021 | 2527.1 | 0 | 22.92 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 0 | 22.99 |
| | | | 100 | 0 | | | | | | 0 | 0 | | | 0-1 | 21.59 |
| | | | 100 | 0 | | | | | | 75 | 0 | | | 0-2 | 20.76 |
| | | | 1 | 0 | | | | | | 1 | 74 | | | 0-8.5 | 14.74 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 17.43 |
| | | | 1 | 99 | | | | | | 1 | 0 | | | 0 | 22.37 |
| | | | 100 | 0 | | | | | | 1 | 74 | | | 0-3.5 | 18.14 |
| 7 | 20 | QPSK | 0 | 0 | 21100 | 2535 | 7 | 15 | QPSK | 1 | 74 | 21271 | 2552.1 | 0 | 23.04 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 0 | 23.1 |
| | | | 100 | 0 | | | | | | 0 | 0 | | | 0-1 | 21.22 |
| | | | 100 | 0 | | | | | | 75 | 0 | | | 0-2 | 20.61 |
| | | | 1 | 0 | | | | | | 1 | 74 | | | 0-8.5 | 14.96 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 17.68 |
| | | | 1 | 99 | | | | | | 1 | 0 | | | 0 | 23.43 |
| | | | 100 | 0 | | | | | | 1 | 74 | | | 0-3.5 | 18.83 |
| 7 | 20 | QPSK | 0 | 0 | 21204 | 2545.4 | 7 | 15 | QPSK | 1 | 74 | 21375 | 2562.5 | 0 | 23.27 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 0 | 23.09 |
| | | | 100 | 0 | | | | | | 0 | 0 | | | 0-1 | 20.47 |
| | | | 100 | 0 | | | | | | 75 | 0 | | | 0-2 | 20.89 |
| | | | 1 | 0 | | | | | | 1 | 74 | | | 0-8.5 | 15.69 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 17.42 |
| | | | 1 | 99 | | | | | | 1 | 0 | | | 0 | 23.03 |
| | | | 100 | 0 | | | | | | 1 | 74 | | | 0-3.5 | 17.81 |

LTE CA_7C (PCC/SCC: 20M+20M)

| Intra Band-Contiguous CA | | | | | | | | | | | | | | | |
|--------------------------|----------|------------|---------|-----------|------------|--------------------|------|----------|------------|---------|-----------|------------|--------------------|----------------|---|
| PCC | | | | | | | | SCC | | | | | | MPR | |
| Band | BW (MHz) | Modulation | RB Size | RB Offset | UL Channel | UL Frequency (MHz) | Band | BW (MHz) | Modulation | RB Size | RB Offset | UL Channel | UL Frequency (MHz) | MPR Level (dB) | Tx Power with UL-CA Active (dBm) Level (dB) |
| 7 | 20 | QPSK | 0 | 0 | 20850 | 2510 | 7 | 20 | QPSK | 1 | 99 | 21048 | 2529.8 | 0 | 23.04 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 22.37 | |
| | | | 100 | 0 | | | | | | 0 | 0 | | | 0-1 | 22.33 |
| | | | 100 | 0 | | | | | | 100 | 0 | | | 0-2 | 20.54 |
| | | | 1 | 0 | | | | | | 1 | 99 | | | 0-8.5 | 14.51 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 18.62 |
| | | | 1 | 99 | | | | | | 1 | 0 | | | 0 | 22.26 |
| | | | 100 | 0 | | | | | | 1 | 99 | | | 0-3.5 | 18.38 |
| 7 | 20 | QPSK | 0 | 0 | 21100 | 2535 | 7 | 20 | QPSK | 1 | 99 | 21298 | 2554.8 | 0 | 22.77 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 22.7 | |
| | | | 100 | 0 | | | | | | 0 | 0 | | | 0-1 | 20.97 |
| | | | 100 | 0 | | | | | | 100 | 0 | | | 0-2 | 20.45 |
| | | | 1 | 0 | | | | | | 1 | 99 | | | 0-8.5 | 14.23 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 18.66 |
| | | | 1 | 99 | | | | | | 1 | 0 | | | 0 | 21.78 |
| | | | 100 | 0 | | | | | | 1 | 99 | | | 0-3.5 | 17.93 |
| 7 | 20 | QPSK | 0 | 0 | 21152 | 2540.2 | 7 | 20 | QPSK | 1 | 99 | 21350 | 2560 | 0 | 22.91 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 22.39 | |
| | | | 100 | 0 | | | | | | 0 | 0 | | | 0-1 | 21.58 |
| | | | 100 | 0 | | | | | | 100 | 0 | | | 0-2 | 20.56 |
| | | | 1 | 0 | | | | | | 1 | 99 | | | 0-8.5 | 14.23 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 18.52 |
| | | | 1 | 99 | | | | | | 1 | 0 | | | 0 | 22.22 |
| | | | 100 | 0 | | | | | | 1 | 99 | | | 0-3.5 | 17.45 |

LTE Band 12

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|-----------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 23017 | 23095 | 23173 | | 23017 | 23095 | 23173 | | 23017 | 23095 | 23173 | |
| | | | 699.7 | 707.5 | 715.3 | | 699.7 | 707.5 | 715.3 | | 699.7 | 707.5 | 715.3 | |
| | | | MHz | MHz | MHz | | MHz | MHz | MHz | | MHz | MHz | MHz | |
| 12 / 1.4M | 1 | 0 | 23.91 | 23.64 | 23.64 | 0 | 22.56 | 22.89 | 22.88 | 1 | 21.66 | 21.72 | 21.42 | 2 |
| | 1 | 2 | 23.76 | 23.81 | 23.85 | 0 | 22.52 | 22.54 | 22.63 | 1 | 21.38 | 21.32 | 21.63 | 2 |
| | 1 | 5 | 23.82 | 23.55 | 23.85 | 0 | 22.83 | 22.36 | 22.45 | 1 | 21.57 | 21.55 | 21.74 | 2 |
| | 3 | 0 | 23.83 | 23.76 | 23.81 | 0 | 22.53 | 22.52 | 22.85 | 1 | 21.65 | 21.83 | 21.58 | 2 |
| | 3 | 1 | 23.90 | 23.86 | 23.82 | 0 | 23.01 | 22.57 | 22.54 | 1 | 21.29 | 21.66 | 21.33 | 2 |
| | 3 | 3 | 23.90 | 23.87 | 23.63 | 0 | 22.84 | 22.73 | 22.54 | 1 | 21.67 | 21.15 | 21.26 | 2 |
| | 6 | 0 | 22.96 | 22.80 | 22.91 | 1 | 21.82 | 21.92 | 21.74 | 2 | 20.27 | 20.17 | 20.72 | 3 |

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|-----------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 23025 | 23095 | 23165 | | 23025 | 23095 | 23165 | | 23025 | 23095 | 23165 | |
| | | | 700.5 | 707.5 | 714.5 | | 700.5 | 707.5 | 714.5 | | 700.5 | 707.5 | 714.5 | |
| | | | MHz | MHz | MHz | | MHz | MHz | MHz | | MHz | MHz | MHz | |
| 12 / 3M | 1 | 0 | 23.71 | 23.89 | 23.67 | 0 | 22.55 | 22.52 | 22.74 | 1 | 21.77 | 21.74 | 21.94 | 2 |
| | 1 | 7 | 23.87 | 23.81 | 23.77 | 0 | 23.03 | 22.58 | 22.89 | 1 | 21.98 | 21.42 | 21.70 | 2 |
| | 1 | 14 | 23.83 | 23.73 | 23.57 | 0 | 22.83 | 22.57 | 22.76 | 1 | 21.67 | 21.75 | 21.57 | 2 |
| | 8 | 0 | 22.65 | 22.95 | 23.02 | 1 | 21.69 | 21.60 | 21.80 | 2 | 20.58 | 20.66 | 20.61 | 3 |
| | 8 | 3 | 22.80 | 22.58 | 22.90 | 1 | 22.07 | 21.58 | 21.74 | 2 | 20.84 | 20.31 | 20.74 | 3 |
| | 8 | 7 | 22.90 | 22.59 | 23.03 | 1 | 21.46 | 22.07 | 21.55 | 2 | 20.46 | 20.71 | 20.37 | 3 |
| | 15 | 0 | 22.87 | 23.06 | 23.07 | 1 | 21.96 | 22.07 | 21.57 | 2 | 20.52 | 20.56 | 20.88 | 3 |

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|-----------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 23035 | 23095 | 23155 | | 23035 | 23095 | 23155 | | 23035 | 23095 | 23155 | |
| | | | 701.5 | 707.5 | 713.5 | | 701.5 | 707.5 | 713.5 | | 701.5 | 707.5 | 713.5 | |
| | | | MHz | MHz | MHz | | MHz | MHz | MHz | | MHz | MHz | MHz | |
| 12 / 5M | 1 | 0 | 23.62 | 23.92 | 23.63 | 0 | 22.75 | 22.77 | 22.91 | 1 | 21.63 | 21.64 | 21.97 | 2 |
| | 1 | 12 | 23.84 | 23.71 | 23.73 | 0 | 22.94 | 22.99 | 22.86 | 1 | 21.93 | 21.65 | 21.97 | 2 |
| | 1 | 24 | 23.89 | 23.79 | 23.82 | 0 | 22.76 | 22.74 | 22.55 | 1 | 21.48 | 21.74 | 21.80 | 2 |
| | 12 | 0 | 22.74 | 22.58 | 22.67 | 1 | 21.78 | 21.64 | 21.42 | 2 | 20.49 | 20.36 | 20.92 | 3 |
| | 12 | 6 | 23.10 | 22.45 | 22.89 | 1 | 21.75 | 21.79 | 21.84 | 2 | 20.65 | 20.53 | 20.83 | 3 |
| | 12 | 13 | 23.00 | 22.94 | 22.59 | 1 | 21.84 | 21.49 | 21.57 | 2 | 20.89 | 20.85 | 20.62 | 3 |
| | 25 | 0 | 22.48 | 22.74 | 22.88 | 1 | 21.51 | 21.43 | 21.57 | 2 | 20.48 | 20.74 | 20.64 | 3 |

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|--------------|------------|--------------|-----------|-----------|------------|---------------------|-----------|-----------|------------|---------------------|-----------|-----------|------------|---------------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 23060 | 23095 | 23130 | | 23060 | 23095 | 23130 | | 23060 | 23095 | 23130 | |
| | | | 704 | 707.5 | 711 | | 704 | 707.5 | 711 | | 704 | 707.5 | 711 | |
| | | | MHz | MHz | MHz | | MHz | MHz | MHz | | MHz | MHz | MHz | |
| 12 / 10M | 1 | 0 | 24.02 | 23.55 | 23.63 | 0 | 22.58 | 22.56 | 22.57 | 1 | 21.58 | 21.96 | 21.83 | 2 |
| | 1 | 24 | 23..88 | 23.84 | 23.98 | 0 | 23.05 | 22.91 | 22.63 | 1 | 21.53 | 21.94 | 21.64 | 2 |
| | 1 | 49 | 23.84 | 23.43 | 23.95 | 0 | 23.02 | 22.40 | 22.57 | 1 | 21.53 | 21.84 | 21.69 | 2 |
| | 25 | 0 | 22.68 | 22.74 | 22.81 | 1 | 21.79 | 21.90 | 21.98 | 2 | 20.74 | 20.43 | 20.49 | 3 |
| | 25 | 12 | 23.02 | 23.13 | 22.63 | 1 | 21.98 | 22.04 | 22.05 | 2 | 20.96 | 20.70 | 20.71 | 3 |
| | 25 | 25 | 22.72 | 22.74 | 22.86 | 1 | 21.92 | 21.91 | 21.63 | 2 | 20.65 | 20.75 | 20.78 | 3 |
| | 50 | 0 | 23.09 | 22.80 | 22.70 | 1 | 21.69 | 22.05 | 22.03 | 2 | 20.81 | 20.53 | 20.45 | 3 |

LTE Band 13

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|-----------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 23205 | 23230 | 23255 | | 23205 | 23230 | 23255 | | 23205 | 23230 | 23255 | |
| | | | 779.5 | 782 | 784.5 | | 779.5 | 782 | 784.5 | | 779.5 | 782 | 784.5 | |
| | | | MHz | MHz | MHz | | MHz | MHz | MHz | | MHz | MHz | MHz | |
| 13 / 5M | 1 | 0 | 23.60 | 24.08 | 23.96 | 0 | 22.31 | 22.58 | 22.77 | 1 | 21.45 | 21.91 | 21.54 | 2 |
| | 1 | 12 | 24.01 | 23.64 | 23.29 | 0 | 22.67 | 22.45 | 22.40 | 1 | 21.49 | 21.73 | 21.37 | 2 |
| | 1 | 24 | 23.88 | 23.81 | 23.56 | 0 | 22.69 | 22.91 | 22.48 | 1 | 21.35 | 21.89 | 21.70 | 2 |
| | 12 | 0 | 22.95 | 22.50 | 22.38 | 1 | 21.97 | 21.49 | 21.98 | 2 | 21.54 | 20.88 | 20.26 | 3 |
| | 12 | 6 | 22.31 | 22.81 | 22.64 | 1 | 21.71 | 21.44 | 21.49 | 2 | 20.70 | 20.78 | 20.67 | 3 |
| | 12 | 13 | 22.82 | 22.59 | 22.41 | 1 | 21.82 | 21.70 | 21.91 | 2 | 20.34 | 20.53 | 20.54 | 3 |
| | 25 | 0 | 22.51 | 22.94 | 22.58 | 1 | 21.64 | 21.79 | 21.59 | 2 | 20.33 | 20.85 | 20.73 | 3 |

| Band / BW | RB Size | RB Offset | QPSK | | 3GPP MPR (dB) | 16QAM | | 3GPP MPR (dB) | 64QAM | | 3GPP MPR (dB) |
|-----------|---------|-----------|--------|--------|---------------|--------|--------|---------------|-------|---|---------------|
| | | | Mid CH | Mid CH | | Mid CH | Mid CH | | | | |
| | | | 23230 | 23230 | | 23230 | 23230 | | | | |
| | | | 782 | 782 | | 782 | 782 | | | | |
| | | | MHz | MHz | | MHz | MHz | | | | |
| 13 / 10M | 1 | 0 | 23.83 | | 0 | 22.44 | | 1 | 21.44 | 2 | |
| | 1 | 24 | 23.73 | | 0 | 22.44 | | 1 | 21.61 | 2 | |
| | 1 | 49 | 23.67 | | 0 | 22.69 | | 1 | 21.51 | 2 | |
| | 25 | 0 | 22.78 | | 1 | 21.40 | | 2 | 20.66 | 3 | |
| | 25 | 12 | 22.75 | | 1 | 21.49 | | 2 | 20.72 | 3 | |
| | 25 | 25 | 22.51 | | 1 | 21.31 | | 2 | 20.77 | 3 | |
| | 50 | 0 | 22.77 | | 1 | 21.66 | | 2 | 20.27 | 3 | |

LTE Band 17

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|-----------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 23755 | 23790 | 23825 | | 23755 | 23790 | 23825 | | 23755 | 23790 | 23825 | |
| | | | 706.5 | 710 | 713.5 | | 706.5 | 710 | 713.5 | | 706.5 | 710 | 713.5 | |
| | | | MHz | MHz | MHz | | | | MHz | MHz | MHz | | | |
| 17 / 5M | 1 | 0 | 23.91 | 23.64 | 23.59 | 0 | 22.59 | 22.94 | 22.78 | 1 | 21.73 | 21.53 | 21.93 | 2 |
| | 1 | 12 | 23.86 | 23.81 | 23.76 | 0 | 22.58 | 22.91 | 22.99 | 1 | 21.72 | 21.69 | 21.69 | 2 |
| | 1 | 24 | 23.67 | 23.89 | 23.70 | 0 | 22.67 | 22.86 | 22.71 | 1 | 21.75 | 22.07 | 21.82 | 2 |
| | 12 | 0 | 23.01 | 22.95 | 23.07 | 1 | 22.10 | 21.57 | 21.97 | 2 | 20.56 | 20.83 | 20.93 | 3 |
| | 12 | 6 | 22.84 | 22.64 | 22.94 | 1 | 21.97 | 21.91 | 21.68 | 2 | 20.50 | 21.02 | 20.49 | 3 |
| | 12 | 13 | 22.88 | 22.93 | 23.01 | 1 | 21.65 | 21.92 | 21.88 | 2 | 20.88 | 20.77 | 20.59 | 3 |
| | 25 | 0 | 23.15 | 22.80 | 23.02 | 1 | 21.88 | 21.72 | 22.16 | 2 | 20.67 | 20.71 | 20.74 | 3 |

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|-----------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 23780 | 23790 | 23800 | | 23780 | 23790 | 23800 | | 23780 | 23790 | 23800 | |
| | | | 709 | 710 | 711 | | 709 | 710 | 711 | | 709 | 710 | 711 | |
| | | | MHz | MHz | MHz | | | | MHz | MHz | MHz | | | |
| 17 / 10M | 1 | 0 | 23.83 | 24.08 | 23.82 | 0 | 22.81 | 22.88 | 22.86 | 1 | 21.92 | 21.48 | 21.59 | 2 |
| | 1 | 24 | 23.92 | 24.02 | 23.80 | 0 | 22.54 | 22.93 | 23.02 | 1 | 21.97 | 21.56 | 21.69 | 2 |
| | 1 | 49 | 24.07 | 23.97 | 24.01 | 0 | 22.68 | 22.98 | 22.93 | 1 | 21.58 | 21.67 | 21.72 | 2 |
| | 25 | 0 | 22.80 | 23.07 | 22.93 | 1 | 21.85 | 21.83 | 21.83 | 2 | 20.44 | 20.67 | 20.44 | 3 |
| | 25 | 12 | 22.55 | 22.62 | 22.43 | 1 | 22.01 | 21.75 | 21.60 | 2 | 20.51 | 20.98 | 20.77 | 3 |
| | 25 | 25 | 22.91 | 23.11 | 23.02 | 1 | 21.95 | 21.74 | 21.51 | 2 | 20.60 | 20.39 | 20.74 | 3 |
| | 50 | 0 | 22.94 | 23.05 | 22.73 | 1 | 21.96 | 21.53 | 21.99 | 2 | 20.82 | 20.56 | 20.83 | 3 |

LTE Band 30

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|-----------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 27685 | 27710 | 27735 | | 27685 | 27710 | 27735 | | 27685 | 27710 | 27735 | |
| | | | 2307.5 | 2310 | 2312.5 | | 2307.5 | 2310 | 2312.5 | | 2307.5 | 2310 | 2312.5 | |
| | | | MHz | MHz | MHz | | | | MHz | MHz | MHz | | | |
| 30 / 5M | 1 | 0 | 23.02 | 23.25 | 23.03 | 0 | 21.67 | 21.45 | 21.22 | 1 | 20.93 | 20.64 | 20.42 | 2 |
| | 1 | 12 | 22.83 | 22.95 | 22.94 | 0 | 21.67 | 21.44 | 21.56 | 1 | 21.03 | 20.50 | 20.77 | 2 |
| | 1 | 24 | 23.12 | 22.64 | 23.15 | 0 | 21.36 | 21.70 | 21.46 | 1 | 20.64 | 20.71 | 20.71 | 2 |
| | 12 | 0 | 21.33 | 21.56 | 21.56 | 1 | 20.92 | 20.40 | 20.51 | 2 | 19.78 | 19.89 | 19.74 | 3 |
| | 12 | 6 | 21.28 | 21.35 | 21.27 | 1 | 20.20 | 20.68 | 20.76 | 2 | 19.81 | 19.61 | 19.66 | 3 |
| | 12 | 13 | 21.44 | 21.65 | 21.73 | 1 | 20.83 | 20.94 | 20.69 | 2 | 20.14 | 19.53 | 19.83 | 3 |
| | 25 | 0 | 21.18 | 21.31 | 21.83 | 1 | 20.71 | 20.20 | 20.76 | 2 | 19.57 | 19.80 | 19.74 | 3 |

| Band / BW | RB Size | RB Offset | QPSK | | 3GPP MPR (dB) | 16QAM | | 3GPP MPR (dB) | 64QAM | | 3GPP MPR (dB) |
|-----------|---------|-----------|--------|--|---------------|--------|--|---------------|--------|--|---------------|
| | | | Mid CH | | | Mid CH | | | Mid CH | | |
| | | | 27710 | | | 27710 | | | 27710 | | |
| | | | 2310 | | | 2310 | | | 2310 | | |
| | | | MHz | | | MHz | | | MHz | | |
| 30 / 10M | 1 | 0 | 23.10 | | 0 | 21.30 | | 1 | 20.41 | | 2 |
| | 1 | 24 | 22.98 | | 0 | 21.29 | | 1 | 20.90 | | 2 |
| | 1 | 49 | 22.71 | | 0 | 21.66 | | 1 | 20.45 | | 2 |
| | 25 | 0 | 21.59 | | 1 | 20.79 | | 2 | 19.50 | | 3 |
| | 25 | 12 | 21.26 | | 1 | 20.23 | | 2 | 19.81 | | 3 |
| | 25 | 25 | 21.17 | | 1 | 20.73 | | 2 | 19.61 | | 3 |
| | 50 | 0 | 21.50 | | 1 | 20.26 | | 2 | 19.35 | | 3 |

LTE Band 38

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|-----------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 37775 | 38000 | 38225 | | 37775 | 38000 | 38225 | | 37775 | 38000 | 38225 | |
| | | | 2572.5 | 2595 | 2617.5 | | 2572.5 | 2595 | 2617.5 | | 2572.5 | 2595 | 2617.5 | |
| | | | MHz | MHz | MHz | | | | MHz | MHz | MHz | | | |
| 38 / 5M | 1 | 0 | 23.81 | 23.63 | 23.31 | 0 | 21.09 | 22.38 | 22.64 | 1 | 20.27 | 21.20 | 21.52 | 2 |
| | 1 | 12 | 23.25 | 23.53 | 23.49 | 0 | 22.21 | 22.34 | 22.51 | 1 | 21.34 | 21.24 | 21.45 | 2 |
| | 1 | 24 | 23.36 | 23.83 | 23.63 | 0 | 21.96 | 22.70 | 22.29 | 1 | 21.22 | 21.67 | 21.28 | 2 |
| | 12 | 0 | 22.51 | 22.30 | 22.38 | 1 | 22.17 | 21.28 | 21.34 | 2 | 20.85 | 20.39 | 20.71 | 3 |
| | 12 | 6 | 22.06 | 22.55 | 22.56 | 1 | 21.42 | 21.40 | 21.75 | 2 | 20.26 | 20.48 | 20.60 | 3 |
| | 12 | 13 | 22.15 | 22.24 | 22.69 | 1 | 21.44 | 21.26 | 21.77 | 2 | 20.02 | 20.54 | 20.76 | 3 |
| | 25 | 0 | 22.63 | 22.18 | 22.45 | 1 | 21.29 | 21.16 | 21.62 | 2 | 20.35 | 20.46 | 20.40 | 3 |

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|-----------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 37800 | 38000 | 38200 | | 37800 | 38000 | 38200 | | 37800 | 38000 | 38200 | |
| | | | 2575 | 2595 | 2615 | | 2575 | 2595 | 2615 | | 2575 | 2595 | 2615 | |
| | | | MHz | MHz | MHz | | | | MHz | MHz | MHz | | | |
| 38 / 10M | 1 | 0 | 23.71 | 23.59 | 23.35 | 0 | 22.89 | 21.93 | 22.93 | 1 | 21.37 | 21.45 | 21.62 | 2 |
| | 1 | 24 | 23.35 | 23.77 | 23.62 | 0 | 22.80 | 22.26 | 22.82 | 1 | 21.65 | 20.79 | 21.61 | 2 |
| | 1 | 49 | 23.84 | 23.55 | 23.28 | 0 | 22.68 | 22.61 | 22.57 | 1 | 21.48 | 21.46 | 22.05 | 2 |
| | 25 | 0 | 22.35 | 22.37 | 22.60 | 1 | 21.67 | 21.71 | 21.63 | 2 | 20.67 | 20.57 | 20.40 | 3 |
| | 25 | 12 | 22.32 | 22.53 | 22.33 | 1 | 21.78 | 21.47 | 21.84 | 2 | 20.20 | 20.71 | 20.23 | 3 |
| | 25 | 25 | 22.22 | 21.99 | 22.61 | 1 | 21.74 | 21.61 | 21.64 | 2 | 20.15 | 20.28 | 20.70 | 3 |
| | 50 | 0 | 22.10 | 22.32 | 22.38 | 1 | 21.35 | 21.67 | 21.44 | 2 | 20.36 | 20.59 | 20.48 | 3 |

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|-----------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 37825 | 38000 | 38175 | | 37825 | 38000 | 38175 | | 37825 | 38000 | 38175 | |
| | | | 2577.5 | 2595 | 2612.5 | | 2577.5 | 2595 | 2612.5 | | 2577.5 | 2595 | 2612.5 | |
| | | | MHz | MHz | MHz | | | | MHz | MHz | MHz | | | |
| 38 / 15M | 1 | 0 | 23.57 | 23.38 | 23.79 | 0 | 21.94 | 23.56 | 22.11 | 1 | 21.19 | 22.29 | 21.69 | 2 |
| | 1 | 37 | 23.24 | 23.62 | 23.55 | 0 | 22.16 | 22.71 | 22.47 | 1 | 21.11 | 21.15 | 21.25 | 2 |
| | 1 | 74 | 23.44 | 23.44 | 23.33 | 0 | 21.81 | 23.02 | 22.49 | 1 | 20.91 | 21.97 | 21.27 | 2 |
| | 36 | 0 | 22.16 | 22.49 | 22.08 | 1 | 21.67 | 21.25 | 21.54 | 2 | 20.20 | 20.40 | 20.65 | 3 |
| | 36 | 19 | 22.08 | 21.90 | 22.26 | 1 | 21.36 | 21.10 | 21.60 | 2 | 20.15 | 20.56 | 20.51 | 3 |
| | 36 | 39 | 22.24 | 22.34 | 22.04 | 1 | 21.50 | 21.32 | 21.27 | 2 | 20.43 | 20.18 | 20.43 | 3 |
| | 75 | 0 | 22.63 | 22.15 | 22.44 | 1 | 21.15 | 21.42 | 21.49 | 2 | 20.20 | 20.16 | 20.49 | 3 |

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|-----------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 37850 | 38000 | 38150 | | 37850 | 38000 | 38150 | | 37850 | 38000 | 38150 | |
| | | | 2580 | 2595 | 2610 | | 2580 | 2595 | 2610 | | 2580 | 2595 | 2610 | |
| | | | MHz | MHz | MHz | | | | MHz | MHz | MHz | | | |
| 38 / 20M | 1 | 0 | 23.60 | 23.59 | 23.41 | 0 | 22.31 | 22.59 | 22.72 | 1 | 21.62 | 21.57 | 21.41 | 2 |
| | 1 | 50 | 23.76 | 23.49 | 23.33 | 0 | 22.50 | 22.28 | 22.77 | 1 | 21.47 | 21.47 | 21.41 | 2 |
| | 1 | 99 | 23.71 | 23.29 | 23.51 | 0 | 22.60 | 22.38 | 22.49 | 1 | 21.25 | 21.06 | 21.89 | 2 |
| | 50 | 0 | 22.51 | 22.73 | 22.29 | 1 | 21.09 | 21.61 | 21.51 | 2 | 20.46 | 20.54 | 20.47 | 3 |
| | 50 | 25 | 22.19 | 22.50 | 22.09 | 1 | 21.24 | 21.23 | 21.69 | 2 | 20.64 | 20.32 | 20.27 | 3 |
| | 50 | 50 | 22.27 | 22.27 | 22.13 | 1 | 21.16 | 21.68 | 21.42 | 2 | 20.23 | 20.19 | 20.34 | 3 |
| | 100 | 0 | 22.21 | 22.30 | 22.44 | 1 | 21.65 | 21.75 | 21.37 | 2 | 20.31 | 20.67 | 20.59 | 3 |

LTE CA_38C (PCC/SCC: 15M+15M)

| Intra Band-Contiguous CA | | | | | | | | | | | | | | | |
|--------------------------|----------|------------|---------|-----------|------------|--------------------|------|----------|------------|---------|-----------|------------|--------------------|----------------|---|
| PCC | | | | | | | SCC | | | | | | | MPR | |
| Band | BW (MHz) | Modulation | RB Size | RB Offset | UL Channel | UL Frequency (MHz) | Band | BW (MHz) | Modulation | RB Size | RB Offset | UL Channel | UL Frequency (MHz) | MPR Level (dB) | Tx Power with UL-CA Active (dBm) Level (dB) |
| 38 | 15 | QPSK | 0 | 0 | 37825 | 2577.5 | 38 | 15 | QPSK | 1 | 74 | 37975 | 2592.5 | 0 | 22.47 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 0 | 23.23 |
| | | | 75 | 0 | | | | | | 0 | 0 | | | 0-1 | 22.08 |
| | | | 75 | 0 | | | | | | 75 | 0 | | | 0-2 | 21.01 |
| | | | 1 | 0 | | | | | | 1 | 74 | | | 0-8.5 | 14.24 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 18.4 |
| | | | 1 | 74 | | | | | | 1 | 0 | | | 0 | 21.48 |
| | | | 75 | 0 | | | | | | 1 | 74 | | | 0-3.5 | 18.71 |
| 38 | 15 | QPSK | 0 | 0 | 38000 | 2595 | 38 | 15 | QPSK | 1 | 74 | 38150 | 2610 | 0 | 22.89 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 0 | 23.19 |
| | | | 75 | 0 | | | | | | 0 | 0 | | | 0-1 | 21.57 |
| | | | 75 | 0 | | | | | | 75 | 0 | | | 0-2 | 20.8 |
| | | | 1 | 0 | | | | | | 1 | 74 | | | 0-8.5 | 14.71 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 18.29 |
| | | | 1 | 74 | | | | | | 1 | 0 | | | 0 | 21.46 |
| | | | 75 | 0 | | | | | | 1 | 74 | | | 0-3.5 | 19.21 |
| 38 | 15 | QPSK | 0 | 0 | 38025 | 2597.5 | 38 | 15 | QPSK | 1 | 74 | 38175 | 2612.5 | 0 | 22.78 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 0 | 23.2 |
| | | | 75 | 0 | | | | | | 0 | 0 | | | 0-1 | 21.62 |
| | | | 75 | 0 | | | | | | 75 | 0 | | | 0-2 | 20.65 |
| | | | 1 | 0 | | | | | | 1 | 74 | | | 0-8.5 | 14.36 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 18.5 |
| | | | 1 | 74 | | | | | | 1 | 0 | | | 0 | 21.71 |
| | | | 75 | 0 | | | | | | 1 | 74 | | | 0-3.5 | 19.56 |

LTE CA_38C (PCC/SCC: 20M+20M)

| Intra Band-Contiguous CA | | | | | | | | | | | | | | | |
|--------------------------|----------|------------|---------|-----------|------------|--------------------|------|----------|------------|---------|-----------|------------|--------------------|----------------|---|
| PCC | | | | | | | | SCC | | | | | | MPR | |
| Band | BW (MHz) | Modulation | RB Size | RB Offset | UL Channel | UL Frequency (MHz) | Band | BW (MHz) | Modulation | RB Size | RB Offset | UL Channel | UL Frequency (MHz) | MPR Level (dB) | Tx Power with UL-CA Active (dBm) Level (dB) |
| 38 | 20 | QPSK | 0 | 0 | 37850 | 2580 | 38 | 20 | QPSK | 1 | 99 | 38048 | 2599.8 | 0 | 22.56 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 22.67 | |
| | | | 100 | 0 | | | | | | 0 | 0 | | | 21.79 | |
| | | | 100 | 0 | | | | | | 100 | 0 | | | 0-2 | 20.94 |
| | | | 1 | 0 | | | | | | 1 | 99 | | | 0-8.5 | 14.53 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 18.59 |
| | | | 1 | 99 | | | | | | 1 | 0 | | | 0 | 21.74 |
| | | | 100 | 0 | | | | | | 1 | 99 | | | 0-3.5 | 19.23 |
| 38 | 20 | QPSK | 0 | 0 | 37901 | 2585.1 | 38 | 20 | QPSK | 1 | 99 | 38099 | 2604.9 | 0 | 22.68 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 23.06 | |
| | | | 100 | 0 | | | | | | 0 | 0 | | | 22.23 | |
| | | | 100 | 0 | | | | | | 100 | 0 | | | 0-2 | 21.05 |
| | | | 1 | 0 | | | | | | 1 | 99 | | | 0-8.5 | 14.56 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 18.44 |
| | | | 1 | 99 | | | | | | 1 | 0 | | | 0 | 21.86 |
| | | | 100 | 0 | | | | | | 1 | 99 | | | 0-3.5 | 18.58 |
| 38 | 20 | QPSK | 0 | 0 | 37952 | 2590.2 | 38 | 20 | QPSK | 1 | 99 | 38150 | 2610 | 0 | 23.01 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 23.17 | |
| | | | 100 | 0 | | | | | | 0 | 0 | | | 21.98 | |
| | | | 100 | 0 | | | | | | 100 | 0 | | | 0-2 | 21.18 |
| | | | 1 | 0 | | | | | | 1 | 99 | | | 0-8.5 | 14.68 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 18.45 |
| | | | 1 | 99 | | | | | | 1 | 0 | | | 0 | 21.45 |
| | | | 100 | 0 | | | | | | 1 | 99 | | | 0-3.5 | 19.25 |

LTE Band 41

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|-----------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 39675 | 40620 | 41565 | | 39675 | 40620 | 41565 | | 39675 | 40620 | 41565 | |
| | | | 2498.5 | 2593 | 2687.5 | | 2498.5 | 2593 | 2687.5 | | 2498.5 | 2593 | 2687.5 | |
| | | | MHz | MHz | MHz | | | | MHz | MHz | MHz | | | |
| 41/ 5M | 1 | 0 | 23.87 | 23.49 | 23.80 | 0 | 22.17 | 22.82 | 22.37 | 1 | 20.93 | 21.63 | 21.02 | 2 |
| | 1 | 12 | 23.40 | 23.74 | 23.68 | 0 | 22.32 | 22.41 | 21.94 | 1 | 21.43 | 21.38 | 21.29 | 2 |
| | 1 | 24 | 23.39 | 23.54 | 23.68 | 0 | 22.41 | 22.55 | 22.49 | 1 | 21.00 | 21.48 | 21.39 | 2 |
| | 12 | 0 | 21.84 | 22.22 | 22.11 | 1 | 22.07 | 21.07 | 21.04 | 2 | 20.28 | 20.08 | 20.40 | 3 |
| | 12 | 6 | 22.29 | 22.19 | 22.29 | 1 | 20.84 | 21.66 | 21.10 | 2 | 20.01 | 20.09 | 20.06 | 3 |
| | 12 | 13 | 22.02 | 22.20 | 21.86 | 1 | 21.21 | 21.44 | 20.87 | 2 | 20.09 | 20.64 | 20.02 | 3 |
| | 25 | 0 | 21.78 | 22.19 | 21.90 | 1 | 21.43 | 21.51 | 21.42 | 2 | 20.42 | 20.35 | 20.21 | 3 |

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|-----------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 39700 | 40620 | 41540 | | 39700 | 40620 | 41540 | | 39700 | 40620 | 41540 | |
| | | | 2501 | 2593 | 2685 | | 2501 | 2593 | 2685 | | 2501 | 2593 | 2685 | |
| | | | MHz | MHz | MHz | | | | MHz | MHz | MHz | | | |
| 41/ 10M | 1 | 0 | 23.29 | 23.50 | 23.75 | 0 | 22.67 | 22.23 | 22.31 | 1 | 21.18 | 21.47 | 21.75 | 2 |
| | 1 | 12 | 23.61 | 23.72 | 23.40 | 0 | 22.50 | 22.36 | 22.07 | 1 | 21.60 | 21.49 | 21.25 | 2 |
| | 1 | 24 | 23.38 | 23.65 | 23.37 | 0 | 22.14 | 22.46 | 22.22 | 1 | 21.19 | 21.41 | 21.41 | 2 |
| | 12 | 0 | 22.41 | 22.69 | 22.04 | 1 | 21.00 | 21.74 | 21.55 | 2 | 20.29 | 20.14 | 20.08 | 3 |
| | 12 | 6 | 22.24 | 22.35 | 22.07 | 1 | 21.53 | 21.52 | 21.00 | 2 | 20.15 | 20.31 | 20.17 | 3 |
| | 12 | 13 | 22.13 | 22.35 | 22.00 | 1 | 21.34 | 21.69 | 21.30 | 2 | 20.21 | 20.59 | 20.23 | 3 |
| | 25 | 0 | 22.20 | 22.12 | 22.15 | 1 | 21.15 | 21.74 | 21.02 | 2 | 20.48 | 20.43 | 20.30 | 3 |

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|-----------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 39725 | 40620 | 41515 | | 39725 | 40620 | 41515 | | 39725 | 40620 | 41515 | |
| | | | 2503.5 | 2593 | 2682.5 | | 2503.5 | 2593 | 2682.5 | | 2503.5 | 2593 | 2682.5 | |
| | | | MHz | MHz | MHz | | | | MHz | MHz | MHz | | | |
| 41/ 15M | 1 | 0 | 23.72 | 23.38 | 23.35 | 0 | 22.49 | 23.51 | 22.18 | 1 | 21.48 | 21.07 | 21.37 | 2 |
| | 1 | 12 | 23.34 | 23.68 | 23.59 | 0 | 22.46 | 22.68 | 22.55 | 1 | 21.53 | 21.35 | 21.24 | 2 |
| | 1 | 24 | 23.56 | 23.69 | 23.65 | 0 | 22.46 | 22.19 | 22.31 | 1 | 21.14 | 21.55 | 21.25 | 2 |
| | 12 | 0 | 22.31 | 22.57 | 22.13 | 1 | 21.10 | 21.08 | 21.45 | 2 | 20.40 | 20.11 | 20.49 | 3 |
| | 12 | 6 | 22.32 | 22.47 | 22.09 | 1 | 21.24 | 22.17 | 21.56 | 2 | 20.15 | 20.24 | 20.41 | 3 |
| | 12 | 13 | 22.24 | 22.64 | 22.53 | 1 | 21.03 | 21.59 | 21.14 | 2 | 20.46 | 20.57 | 20.41 | 3 |
| | 25 | 0 | 22.09 | 22.64 | 22.52 | 1 | 20.96 | 21.31 | 21.40 | 2 | 20.24 | 20.53 | 20.35 | 3 |

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|--------------|------------|--------------|-----------|-----------|------------|---------------------|-----------|-----------|------------|---------------------|-----------|-----------|------------|---------------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 39750 | 40620 | 41490 | | 39750 | 40620 | 41490 | | 39750 | 40620 | 41490 | |
| | | | 2506 | 2593 | 2680 | | 2506 | 2593 | 2680 | | 2506 | 2593 | 2680 | |
| | | | MHz | MHz | MHz | MHz | MHz | MHz | MHz | MHz | MHz | | | |
| 41/ 20M | 1 | 0 | 23.69 | 23.66 | 23.83 | 0 | 22.64 | 22.72 | 22.48 | 1 | 21.22 | 21.27 | 21.25 | 2 |
| | 1 | 12 | 23.59 | 23.80 | 23.68 | 0 | 22.15 | 22.09 | 22.29 | 1 | 21.65 | 21.48 | 21.54 | 2 |
| | 1 | 24 | 23.81 | 23.42 | 23.69 | 0 | 22.40 | 22.08 | 22.17 | 1 | 21.31 | 21.40 | 21.62 | 2 |
| | 12 | 0 | 22.44 | 22.75 | 22.33 | 1 | 21.76 | 21.40 | 21.30 | 2 | 20.30 | 20.54 | 20.48 | 3 |
| | 12 | 6 | 22.44 | 22.59 | 22.28 | 1 | 21.52 | 21.59 | 21.17 | 2 | 20.46 | 20.41 | 20.45 | 3 |
| | 12 | 13 | 22.05 | 22.21 | 22.11 | 1 | 21.51 | 21.50 | 21.17 | 2 | 20.47 | 20.35 | 20.18 | 3 |
| | 25 | 0 | 22.11 | 22.38 | 22.08 | 1 | 21.30 | 21.56 | 21.45 | 2 | 20.61 | 20.28 | 20.19 | 3 |

LTE CA_41C (PCC/SCC: 5M+20M)

| Intra Band-Contiguous CA | | | | | | | | | | | | | | | |
|--------------------------|----------|------------|---------|-----------|------------|--------------------|------|----------|------------|---------|-----------|------------|--------------------|----------------|---|
| PCC | | | | | | | | SCC | | | | | | MPR | |
| Band | BW (MHz) | Modulation | RB Size | RB Offset | UL Channel | UL Frequency (MHz) | Band | BW (MHz) | Modulation | RB Size | RB Offset | UL Channel | UL Frequency (MHz) | MPR Level (dB) | Tx Power with UL-CA Active (dBm) Level (dB) |
| 41 | 5 | QPSK | 0 | 0 | 39675 | 2498.5 | 41 | 20 | QPSK | 1 | 99 | 39792 | 2510.2 | 0 | 22.98 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 22.81 | |
| | | | 25 | 0 | | | | | | 0 | 0 | | | 22.05 | |
| | | | 25 | 0 | | | | | | 100 | 0 | | | 0-2 | 21.4 |
| | | | 1 | 0 | | | | | | 1 | 99 | | | 0-8.5 | 15.27 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 18.53 |
| | | | 1 | 24 | | | | | | 1 | 0 | | | 0 | 22.69 |
| | | | 25 | 0 | | | | | | 1 | 99 | | | 0-3.5 | 18.6 |
| 41 | 5 | QPSK | 0 | 0 | 40620 | 2593 | 41 | 20 | QPSK | 1 | 99 | 40737 | 2604.7 | 0 | 23.31 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 22.95 | |
| | | | 25 | 0 | | | | | | 0 | 0 | | | 22.55 | |
| | | | 25 | 0 | | | | | | 100 | 0 | | | 0-2 | 21.27 |
| | | | 1 | 0 | | | | | | 1 | 99 | | | 0-8.5 | 15.68 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 19.82 |
| | | | 1 | 24 | | | | | | 1 | 0 | | | 0 | 22.26 |
| | | | 25 | 0 | | | | | | 1 | 99 | | | 0-3.5 | 19.67 |
| 41 | 5 | QPSK | 0 | 0 | 41373 | 2668.3 | 41 | 20 | QPSK | 1 | 99 | 41490 | 2680 | 0 | 23.23 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 23.44 | |
| | | | 25 | 0 | | | | | | 0 | 0 | | | 22.37 | |
| | | | 25 | 0 | | | | | | 100 | 0 | | | 0-2 | 21.55 |
| | | | 1 | 0 | | | | | | 1 | 99 | | | 0-8.5 | 14.85 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 19.62 |
| | | | 1 | 24 | | | | | | 1 | 0 | | | 0 | 23.07 |
| | | | 25 | 0 | | | | | | 1 | 99 | | | 0-3.5 | 17.82 |

LTE CA_41C (PCC/SCC: 10M+5M)

| Intra Band-Contiguous CA | | | | | | | | | | | | | | | |
|--------------------------|----------|------------|---------|-----------|------------|--------------------|------|----------|------------|---------|-----------|------------|--------------------|----------------|---|
| PCC | | | | | | | SCC | | | | | | | MPR | |
| Band | BW (MHz) | Modulation | RB Size | RB Offset | UL Channel | UL Frequency (MHz) | Band | BW (MHz) | Modulation | RB Size | RB Offset | UL Channel | UL Frequency (MHz) | MPR Level (dB) | Tx Power with UL-CA Active (dBm) Level (dB) |
| 41 | 10 | QPSK | 0 | 0 | 39700 | 2501 | 41 | 5 | QPSK | 1 | 24 | 39772 | 2508.2 | 0 | 22.77 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 22.73 | |
| | | | 50 | 0 | | | | | | 0 | 0 | | | 0-1 | 21.94 |
| | | | 50 | 0 | | | | | | 25 | 0 | | | 0-2 | 21.71 |
| | | | 1 | 0 | | | | | | 1 | 24 | | | 0-8.5 | 15.47 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 18.49 |
| | | | 1 | 49 | | | | | | 1 | 0 | | | 0 | 22.7 |
| | | | 50 | 0 | | | | | | 1 | 24 | | | 0-3.5 | 18.02 |
| 41 | 10 | QPSK | 0 | 0 | 40620 | 2593 | 41 | 5 | QPSK | 1 | 24 | 40692 | 2600.2 | 0 | 23.58 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 23.51 | |
| | | | 50 | 0 | | | | | | 0 | 0 | | | 0-1 | 22.97 |
| | | | 50 | 0 | | | | | | 25 | 0 | | | 0-2 | 21.19 |
| | | | 1 | 0 | | | | | | 1 | 24 | | | 0-8.5 | 15.17 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 19.73 |
| | | | 1 | 49 | | | | | | 1 | 0 | | | 0 | 21.87 |
| | | | 50 | 0 | | | | | | 1 | 24 | | | 0-3.5 | 19.89 |
| 41 | 10 | QPSK | 0 | 0 | 41493 | 2680.3 | 41 | 5 | QPSK | 1 | 24 | 41565 | 2687.5 | 0 | 22.84 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 22.79 | |
| | | | 50 | 0 | | | | | | 0 | 0 | | | 0-1 | 21.87 |
| | | | 50 | 0 | | | | | | 25 | 0 | | | 0-2 | 20.99 |
| | | | 1 | 0 | | | | | | 1 | 24 | | | 0-8.5 | 14.4 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 19.38 |
| | | | 1 | 49 | | | | | | 1 | 0 | | | 0 | 22.89 |
| | | | 50 | 0 | | | | | | 1 | 24 | | | 0-3.5 | 18.52 |

LTE CA_41C (PCC/SCC: 10M+10M)

| Intra Band-Contiguous CA | | | | | | | | | | | | | | | |
|--------------------------|----------|------------|---------|-----------|------------|--------------------|------|----------|------------|---------|-----------|------------|--------------------|----------------|---|
| PCC | | | | | | | | SCC | | | | | | MPR | |
| Band | BW (MHz) | Modulation | RB Size | RB Offset | UL Channel | UL Frequency (MHz) | Band | BW (MHz) | Modulation | RB Size | RB Offset | UL Channel | UL Frequency (MHz) | MPR Level (dB) | Tx Power with UL-CA Active (dBm) Level (dB) |
| 41 | 10 | QPSK | 0 | 0 | 39700 | 2501 | 41 | 10 | QPSK | 1 | 49 | 39799 | 2510.9 | 0 | 23.54 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 0 | 23.12 |
| | | | 50 | 0 | | | | | | 0 | 0 | | | 0-1 | 21.38 |
| | | | 50 | 0 | | | | | | 50 | 0 | | | 0-2 | 22.18 |
| | | | 1 | 0 | | | | | | 1 | 49 | | | 0-8.5 | 15.64 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 17.81 |
| | | | 1 | 49 | | | | | | 1 | 0 | | | 0 | 22.95 |
| | | | 50 | 0 | | | | | | 1 | 49 | | | 0-3.5 | 18.59 |
| 41 | 10 | QPSK | 0 | 0 | 40620 | 2593 | 41 | 10 | QPSK | 1 | 49 | 40719 | 2602.9 | 0 | 22.84 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 0 | 22.77 |
| | | | 50 | 0 | | | | | | 0 | 0 | | | 0-1 | 22.1 |
| | | | 50 | 0 | | | | | | 50 | 0 | | | 0-2 | 21.85 |
| | | | 1 | 0 | | | | | | 1 | 49 | | | 0-8.5 | 16.15 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 19.19 |
| | | | 1 | 49 | | | | | | 1 | 0 | | | 0 | 22.19 |
| | | | 50 | 0 | | | | | | 1 | 49 | | | 0-3.5 | 20.01 |
| 41 | 10 | QPSK | 0 | 0 | 41441 | 2675.1 | 41 | 10 | QPSK | 1 | 49 | 41540 | 2685 | 0 | 22.87 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 0 | 23.04 |
| | | | 50 | 0 | | | | | | 0 | 0 | | | 0-1 | 22.38 |
| | | | 50 | 0 | | | | | | 50 | 0 | | | 0-2 | 20.71 |
| | | | 1 | 0 | | | | | | 1 | 49 | | | 0-8.5 | 14.43 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 19.71 |
| | | | 1 | 49 | | | | | | 1 | 0 | | | 0 | 23.8 |
| | | | 50 | 0 | | | | | | 1 | 49 | | | 0-3.5 | 17.49 |

LTE CA_41C (PCC/SCC: 10M+15M)

| Intra Band-Contiguous CA | | | | | | | | | | | | | | | |
|--------------------------|----------|------------|---------|-----------|------------|--------------------|------|----------|------------|---------|-----------|------------|--------------------|----------------|---|
| PCC | | | | | | | | SCC | | | | | | MPR | |
| Band | BW (MHz) | Modulation | RB Size | RB Offset | UL Channel | UL Frequency (MHz) | Band | BW (MHz) | Modulation | RB Size | RB Offset | UL Channel | UL Frequency (MHz) | MPR Level (dB) | Tx Power with UL-CA Active (dBm) Level (dB) |
| 41 | 10 | QPSK | 0 | 0 | 39700 | 2501 | 41 | 15 | QPSK | 1 | 74 | 39820 | 2513 | 0 | 22.7 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 22.63 | |
| | | | 50 | 0 | | | | | | 0 | 0 | | | 22.24 | |
| | | | 50 | 0 | | | | | | 75 | 0 | | | 0-2 | 22.08 |
| | | | 1 | 0 | | | | | | 1 | 74 | | | 0-8.5 | 16.37 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 18.06 |
| | | | 1 | 49 | | | | | | 1 | 0 | | | 0 | 22.88 |
| | | | 50 | 0 | | | | | | 1 | 74 | | | 0-3.5 | 18.58 |
| 41 | 10 | QPSK | 0 | 0 | 40620 | 2593 | 41 | 15 | QPSK | 1 | 74 | 40740 | 2605 | 0 | 22.72 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 23.17 | |
| | | | 50 | 0 | | | | | | 0 | 0 | | | 0-1 | 21.95 |
| | | | 50 | 0 | | | | | | 75 | 0 | | | 0-2 | 21.64 |
| | | | 1 | 0 | | | | | | 1 | 74 | | | 0-8.5 | 15.89 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 20.41 |
| | | | 1 | 49 | | | | | | 1 | 0 | | | 0 | 22.95 |
| | | | 50 | 0 | | | | | | 1 | 74 | | | 0-3.5 | 20.17 |
| 41 | 10 | QPSK | 0 | 0 | 41395 | 2670.5 | 41 | 15 | QPSK | 1 | 74 | 41515 | 2682.5 | 0 | 22.42 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 23.79 | |
| | | | 50 | 0 | | | | | | 0 | 0 | | | 0-1 | 22.79 |
| | | | 50 | 0 | | | | | | 75 | 0 | | | 0-2 | 21.93 |
| | | | 1 | 0 | | | | | | 1 | 74 | | | 0-8.5 | 15.01 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 19.19 |
| | | | 1 | 49 | | | | | | 1 | 0 | | | 0 | 22.86 |
| | | | 50 | 0 | | | | | | 1 | 74 | | | 0-3.5 | 17.92 |

LTE CA_41C (PCC/SCC: 10M+20M)

| Intra Band-Contiguous CA | | | | | | | | | | | | | | | |
|--------------------------|----------|------------|---------|-----------|------------|--------------------|------|----------|------------|---------|-----------|------------|--------------------|----------------|---|
| PCC | | | | | | | SCC | | | | | | | MPR | |
| Band | BW (MHz) | Modulation | RB Size | RB Offset | UL Channel | UL Frequency (MHz) | Band | BW (MHz) | Modulation | RB Size | RB Offset | UL Channel | UL Frequency (MHz) | MPR Level (dB) | Tx Power with UL-CA Active (dBm) Level (dB) |
| 41 | 10 | QPSK | 0 | 0 | 39700 | 2501 | 41 | 20 | QPSK | 1 | 99 | 39844 | 2515.4 | 0 | 22.73 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 22.84 | |
| | | | 50 | 0 | | | | | | 0 | 0 | | | 0-1 | 22.2 |
| | | | 50 | 0 | | | | | | 100 | 0 | | | 0-2 | 21.9 |
| | | | 1 | 0 | | | | | | 1 | 99 | | | 0-8.5 | 16.04 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 18.24 |
| | | | 1 | 49 | | | | | | 1 | 0 | | | 0 | 22.41 |
| | | | 50 | 0 | | | | | | 1 | 99 | | | 0-3.5 | 18.9 |
| 41 | 10 | QPSK | 0 | 0 | 40620 | 2593 | 41 | 20 | QPSK | 1 | 99 | 40764 | 2607.4 | 0 | 23.23 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 22.86 | |
| | | | 50 | 0 | | | | | | 0 | 0 | | | 0-1 | 21.86 |
| | | | 50 | 0 | | | | | | 100 | 0 | | | 0-2 | 22.03 |
| | | | 1 | 0 | | | | | | 1 | 99 | | | 0-8.5 | 15.38 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 19.55 |
| | | | 1 | 49 | | | | | | 1 | 0 | | | 0 | 22.96 |
| | | | 50 | 0 | | | | | | 1 | 99 | | | 0-3.5 | 19.47 |
| 41 | 10 | QPSK | 0 | 0 | 41346 | 2665.6 | 41 | 20 | QPSK | 1 | 99 | 41490 | 2680 | 0 | 22.36 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 22.56 | |
| | | | 50 | 0 | | | | | | 0 | 0 | | | 0-1 | 22 |
| | | | 50 | 0 | | | | | | 100 | 0 | | | 0-2 | 21.28 |
| | | | 1 | 0 | | | | | | 1 | 99 | | | 0-8.5 | 14.76 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 19.79 |
| | | | 1 | 49 | | | | | | 1 | 0 | | | 0 | 23.07 |
| | | | 50 | 0 | | | | | | 1 | 99 | | | 0-3.5 | 17.66 |

LTE CA_41C (PCC/SCC: 15M+5M)

| Intra Band-Contiguous CA | | | | | | | | | | | | | | | |
|--------------------------|----------|------------|---------|-----------|------------|--------------------|------|----------|------------|---------|-----------|------------|--------------------|----------------|---|
| PCC | | | | | | | | SCC | | | | | | MPR | |
| Band | BW (MHz) | Modulation | RB Size | RB Offset | UL Channel | UL Frequency (MHz) | Band | BW (MHz) | Modulation | RB Size | RB Offset | UL Channel | UL Frequency (MHz) | MPR Level (dB) | Tx Power with UL-CA Active (dBm) Level (dB) |
| 41 | 15 | QPSK | 0 | 0 | 39725 | 2503.5 | 41 | 5 | QPSK | 1 | 24 | 39818 | 2512.8 | 0 | 22.79 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 22.58 | |
| | | | 75 | 0 | | | | | | 0 | 0 | | | 22.21 | |
| | | | 75 | 0 | | | | | | 25 | 0 | | | 0-2 | 22.47 |
| | | | 1 | 0 | | | | | | 1 | 24 | | | 0-8.5 | 15.38 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 18.25 |
| | | | 1 | 74 | | | | | | 1 | 0 | | | 0 | 22.39 |
| | | | 75 | 0 | | | | | | 1 | 24 | | | 0-3.5 | 19.42 |
| 41 | 15 | QPSK | 0 | 0 | 40620 | 2593 | 41 | 5 | QPSK | 1 | 24 | 40713 | 2602.3 | 0 | 23.26 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 23.16 | |
| | | | 75 | 0 | | | | | | 0 | 0 | | | 0-1 | 22.74 |
| | | | 75 | 0 | | | | | | 25 | 0 | | | 0-2 | 21.87 |
| | | | 1 | 0 | | | | | | 1 | 24 | | | 0-8.5 | 16.04 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 20.16 |
| | | | 1 | 74 | | | | | | 1 | 0 | | | 0 | 22.04 |
| | | | 75 | 0 | | | | | | 1 | 24 | | | 0-3.5 | 19.48 |
| 41 | 15 | QPSK | 0 | 0 | 41472 | 2678.2 | 41 | 5 | QPSK | 1 | 24 | 41565 | 2687.5 | 0 | 23.39 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 23.98 | |
| | | | 75 | 0 | | | | | | 0 | 0 | | | 0-1 | 21.67 |
| | | | 75 | 0 | | | | | | 25 | 0 | | | 0-2 | 21.66 |
| | | | 1 | 0 | | | | | | 1 | 24 | | | 0-8.5 | 15.46 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 19.38 |
| | | | 1 | 74 | | | | | | 1 | 0 | | | 0 | 23.55 |
| | | | 75 | 0 | | | | | | 1 | 24 | | | 0-3.5 | 17.74 |

LTE CA_41C (PCC/SCC: 15M+10M)

| Intra Band-Contiguous CA | | | | | | | | | | | | | | | |
|--------------------------|----------|------------|---------|-----------|------------|--------------------|------|----------|------------|---------|-----------|------------|--------------------|----------------|---|
| PCC | | | | | | | SCC | | | | | | | MPR | |
| Band | BW (MHz) | Modulation | RB Size | RB Offset | UL Channel | UL Frequency (MHz) | Band | BW (MHz) | Modulation | RB Size | RB Offset | UL Channel | UL Frequency (MHz) | MPR Level (dB) | Tx Power with UL-CA Active (dBm) Level (dB) |
| 41 | 15 | QPSK | 0 | 0 | 39725 | 2503.5 | 41 | 10 | QPSK | 1 | 49 | 39845 | 2515.5 | 0 | 23.14 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 23.16 | |
| | | | 75 | 0 | | | | | | 0 | 0 | | | 22.32 | |
| | | | 75 | 0 | | | | | | 50 | 0 | | | 0-2 | 21.5 |
| | | | 1 | 0 | | | | | | 1 | 49 | | | 0-8.5 | 15.82 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 18.91 |
| | | | 1 | 74 | | | | | | 1 | 0 | | | 0 | 22.83 |
| | | | 75 | 0 | | | | | | 1 | 49 | | | 0-3.5 | 18.37 |
| 41 | 15 | QPSK | 0 | 0 | 40620 | 2593 | 41 | 10 | QPSK | 1 | 49 | 40740 | 2605 | 0 | 22.74 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 23.11 | |
| | | | 75 | 0 | | | | | | 0 | 0 | | | 22.34 | |
| | | | 75 | 0 | | | | | | 50 | 0 | | | 0-2 | 21.87 |
| | | | 1 | 0 | | | | | | 1 | 49 | | | 0-8.5 | 15.26 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 20.07 |
| | | | 1 | 74 | | | | | | 1 | 0 | | | 0 | 22.03 |
| | | | 75 | 0 | | | | | | 1 | 49 | | | 0-3.5 | 19.74 |
| 41 | 15 | QPSK | 0 | 0 | 41420 | 2673 | 41 | 10 | QPSK | 1 | 49 | 41540 | 2685 | 0 | 22.95 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 23.71 | |
| | | | 75 | 0 | | | | | | 0 | 0 | | | 22.2 | |
| | | | 75 | 0 | | | | | | 50 | 0 | | | 0-2 | 21.14 |
| | | | 1 | 0 | | | | | | 1 | 49 | | | 0-8.5 | 15.38 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 19.37 |
| | | | 1 | 74 | | | | | | 1 | 0 | | | 0 | 23.24 |
| | | | 75 | 0 | | | | | | 1 | 49 | | | 0-3.5 | 18.46 |

LTE CA_41C (PCC/SCC: 15M+15M)

| Intra Band-Contiguous CA | | | | | | | | | | | | | | | |
|--------------------------|----------|------------|---------|-----------|------------|--------------------|------|----------|------------|---------|-----------|------------|--------------------|----------------|---|
| PCC | | | | | | | SCC | | | | | | | MPR | |
| Band | BW (MHz) | Modulation | RB Size | RB Offset | UL Channel | UL Frequency (MHz) | Band | BW (MHz) | Modulation | RB Size | RB Offset | UL Channel | UL Frequency (MHz) | MPR Level (dB) | Tx Power with UL-CA Active (dBm) Level (dB) |
| 41 | 15 | QPSK | 0 | 0 | 39725 | 2503.5 | 41 | 15 | QPSK | 1 | 74 | 39875 | 2518.5 | 0 | 23.24 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 22.6 | |
| | | | 75 | 0 | | | | | | 0 | 0 | | | 0-1 | 21.9 |
| | | | 75 | 0 | | | | | | 75 | 0 | | | 0-2 | 22.76 |
| | | | 1 | 0 | | | | | | 1 | 74 | | | 0-8.5 | 16.79 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 18.71 |
| | | | 1 | 74 | | | | | | 1 | 0 | | | 0 | 22.66 |
| | | | 75 | 0 | | | | | | 1 | 74 | | | 0-3.5 | 18.55 |
| 41 | 15 | QPSK | 0 | 0 | 40620 | 2593 | 41 | 15 | QPSK | 1 | 74 | 40770 | 2608 | 0 | 23.08 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 22.68 | |
| | | | 75 | 0 | | | | | | 0 | 0 | | | 0-1 | 22.77 |
| | | | 75 | 0 | | | | | | 75 | 0 | | | 0-2 | 21.34 |
| | | | 1 | 0 | | | | | | 1 | 74 | | | 0-8.5 | 15.1 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 20.02 |
| | | | 1 | 74 | | | | | | 1 | 0 | | | 0 | 22.92 |
| | | | 75 | 0 | | | | | | 1 | 74 | | | 0-3.5 | 19.64 |
| 41 | 15 | QPSK | 0 | 0 | 41365 | 2667.5 | 41 | 15 | QPSK | 1 | 74 | 41515 | 2682.5 | 0 | 22.36 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 23.42 | |
| | | | 75 | 0 | | | | | | 0 | 0 | | | 0-1 | 21.98 |
| | | | 75 | 0 | | | | | | 75 | 0 | | | 0-2 | 21.65 |
| | | | 1 | 0 | | | | | | 1 | 74 | | | 0-8.5 | 14.91 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 19.3 |
| | | | 1 | 74 | | | | | | 1 | 0 | | | 0 | 23.38 |
| | | | 75 | 0 | | | | | | 1 | 74 | | | 0-3.5 | 17.37 |

LTE CA_41C (PCC/SCC: 15M+20M)

| Intra Band-Contiguous CA | | | | | | | | | | | | | | | |
|--------------------------|----------|------------|---------|-----------|------------|--------------------|------|----------|------------|---------|-----------|------------|--------------------|----------------|---|
| PCC | | | | | | | SCC | | | | | | | MPR | |
| Band | BW (MHz) | Modulation | RB Size | RB Offset | UL Channel | UL Frequency (MHz) | Band | BW (MHz) | Modulation | RB Size | RB Offset | UL Channel | UL Frequency (MHz) | MPR Level (dB) | Tx Power with UL-CA Active (dBm) Level (dB) |
| 41 | 15 | QPSK | 0 | 0 | 39725 | 2503.5 | 41 | 20 | QPSK | 1 | 99 | 39896 | 2520.6 | 0 | 22.35 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 22.91 | |
| | | | 75 | 0 | | | | | | 0 | 0 | | | 0-1 | 22.59 |
| | | | 75 | 0 | | | | | | 100 | 0 | | | 0-2 | 21.93 |
| | | | 1 | 0 | | | | | | 1 | 99 | | | 0-8.5 | 15.86 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 18.36 |
| | | | 1 | 74 | | | | | | 1 | 0 | | | 0 | 21.95 |
| | | | 75 | 0 | | | | | | 1 | 99 | | | 0-3.5 | 19.07 |
| 41 | 15 | QPSK | 0 | 0 | 40620 | 2593 | 41 | 20 | QPSK | 1 | 99 | 40791 | 2610.1 | 0 | 23.52 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 23.53 | |
| | | | 75 | 0 | | | | | | 0 | 0 | | | 0-1 | 22.33 |
| | | | 75 | 0 | | | | | | 100 | 0 | | | 0-2 | 21.77 |
| | | | 1 | 0 | | | | | | 1 | 99 | | | 0-8.5 | 15.36 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 19.03 |
| | | | 1 | 74 | | | | | | 1 | 0 | | | 0 | 23.92 |
| | | | 75 | 0 | | | | | | 1 | 99 | | | 0-3.5 | 18.95 |
| 41 | 15 | QPSK | 0 | 0 | 41319 | 2662.9 | 41 | 20 | QPSK | 1 | 99 | 41490 | 2680 | 0 | 22.32 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 22.38 | |
| | | | 75 | 0 | | | | | | 0 | 0 | | | 0-1 | 21.61 |
| | | | 75 | 0 | | | | | | 100 | 0 | | | 0-2 | 20.87 |
| | | | 1 | 0 | | | | | | 1 | 99 | | | 0-8.5 | 14.53 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 20.7 |
| | | | 1 | 74 | | | | | | 1 | 0 | | | 0 | 24 |
| | | | 75 | 0 | | | | | | 1 | 99 | | | 0-3.5 | 17.79 |

LTE CA_41C (PCC/SCC: 20M+5M)

| Intra Band-Contiguous CA | | | | | | | | | | | | | | | |
|--------------------------|----------|------------|---------|-----------|------------|--------------------|------|----------|------------|---------|-----------|------------|--------------------|----------------|---|
| PCC | | | | | | | | SCC | | | | | | MPR | |
| Band | BW (MHz) | Modulation | RB Size | RB Offset | UL Channel | UL Frequency (MHz) | Band | BW (MHz) | Modulation | RB Size | RB Offset | UL Channel | UL Frequency (MHz) | MPR Level (dB) | Tx Power with UL-CA Active (dBm) Level (dB) |
| 41 | 20 | QPSK | 0 | 0 | 39750 | 2506 | 41 | 5 | QPSK | 1 | 24 | 39867 | 2517.7 | 0 | 22.75 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 22.41 | |
| | | | 100 | 0 | | | | | | 0 | 0 | | | 0-1 | 22.31 |
| | | | 100 | 0 | | | | | | 25 | 0 | | | 0-2 | 21.17 |
| | | | 1 | 0 | | | | | | 1 | 24 | | | 0-8.5 | 15.92 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 18.14 |
| | | | 1 | 99 | | | | | | 1 | 0 | | | 0 | 22.93 |
| | | | 100 | 0 | | | | | | 1 | 24 | | | 0-3.5 | 18.92 |
| 41 | 20 | QPSK | 0 | 0 | 40620 | 2593 | 41 | 5 | QPSK | 1 | 24 | 40737 | 2604.7 | 0 | 22.94 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 23.34 | |
| | | | 100 | 0 | | | | | | 0 | 0 | | | 0-1 | 22.86 |
| | | | 100 | 0 | | | | | | 25 | 0 | | | 0-2 | 21.85 |
| | | | 1 | 0 | | | | | | 1 | 24 | | | 0-8.5 | 15.63 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 19.6 |
| | | | 1 | 99 | | | | | | 1 | 0 | | | 0 | 22.63 |
| | | | 100 | 0 | | | | | | 1 | 24 | | | 0-3.5 | 20.42 |
| 41 | 20 | QPSK | 0 | 0 | 41448 | 2675.8 | 41 | 5 | QPSK | 1 | 24 | 41565 | 2687.5 | 0 | 23.4 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 23.1 | |
| | | | 100 | 0 | | | | | | 0 | 0 | | | 0-1 | 22.54 |
| | | | 100 | 0 | | | | | | 25 | 0 | | | 0-2 | 21.48 |
| | | | 1 | 0 | | | | | | 1 | 24 | | | 0-8.5 | 15.24 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 20.15 |
| | | | 1 | 99 | | | | | | 1 | 0 | | | 0 | 23.42 |
| | | | 100 | 0 | | | | | | 1 | 24 | | | 0-3.5 | 18.84 |

LTE CA_41C (PCC/SCC: 20M+10M)

| Intra Band-Contiguous CA | | | | | | | | | | | | | | | |
|--------------------------|----------|------------|---------|-----------|------------|--------------------|------|----------|------------|---------|-----------|------------|--------------------|----------------|---|
| PCC | | | | | | | | SCC | | | | | | MPR | |
| Band | BW (MHz) | Modulation | RB Size | RB Offset | UL Channel | UL Frequency (MHz) | Band | BW (MHz) | Modulation | RB Size | RB Offset | UL Channel | UL Frequency (MHz) | MPR Level (dB) | Tx Power with UL-CA Active (dBm) Level (dB) |
| 41 | 20 | QPSK | 0 | 0 | 39750 | 2506 | 41 | 10 | QPSK | 1 | 49 | 39894 | 2520.4 | 0 | 23.26 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 23.31 | |
| | | | 100 | 0 | | | | | | 0 | 0 | | | 0-1 | 21.74 |
| | | | 100 | 0 | | | | | | 50 | 0 | | | 0-2 | 21.59 |
| | | | 1 | 0 | | | | | | 1 | 49 | | | 0-8.5 | 15.81 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 18.8 |
| | | | 1 | 99 | | | | | | 1 | 0 | | | 0 | 22.11 |
| | | | 100 | 0 | | | | | | 1 | 49 | | | 0-3.5 | 19.28 |
| 41 | 20 | QPSK | 0 | 0 | 40620 | 2593 | 41 | 10 | QPSK | 1 | 49 | 40764 | 2607.4 | 0 | 23.35 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 23.8 | |
| | | | 100 | 0 | | | | | | 0 | 0 | | | 0-1 | 23.03 |
| | | | 100 | 0 | | | | | | 50 | 0 | | | 0-2 | 21.17 |
| | | | 1 | 0 | | | | | | 1 | 49 | | | 0-8.5 | 15.47 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 19.12 |
| | | | 1 | 99 | | | | | | 1 | 0 | | | 0 | 22.86 |
| | | | 100 | 0 | | | | | | 1 | 49 | | | 0-3.5 | 19.39 |
| 41 | 20 | QPSK | 0 | 0 | 41396 | 2670.6 | 41 | 10 | QPSK | 1 | 49 | 41540 | 2685 | 0 | 23.15 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 23.51 | |
| | | | 100 | 0 | | | | | | 0 | 0 | | | 0-1 | 22.03 |
| | | | 100 | 0 | | | | | | 50 | 0 | | | 0-2 | 21.58 |
| | | | 1 | 0 | | | | | | 1 | 49 | | | 0-8.5 | 15.42 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 18.92 |
| | | | 1 | 99 | | | | | | 1 | 0 | | | 0 | 23.25 |
| | | | 100 | 0 | | | | | | 1 | 49 | | | 0-3.5 | 18.26 |

LTE CA_41C (PCC/SCC: 20M+15M)

| Intra Band-Contiguous CA | | | | | | | | | | | | | | | |
|--------------------------|----------|------------|---------|-----------|------------|--------------------|------|----------|------------|---------|-----------|------------|--------------------|----------------|---|
| PCC | | | | | | | SCC | | | | | | | MPR | |
| Band | BW (MHz) | Modulation | RB Size | RB Offset | UL Channel | UL Frequency (MHz) | Band | BW (MHz) | Modulation | RB Size | RB Offset | UL Channel | UL Frequency (MHz) | MPR Level (dB) | Tx Power with UL-CA Active (dBm) Level (dB) |
| 41 | 20 | QPSK | 0 | 0 | 39750 | 2506 | 41 | 15 | QPSK | 1 | 74 | 39921 | 2523.1 | 0 | 23.09 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 0 | 23.32 |
| | | | 100 | 0 | | | | | | 0 | 0 | | | 0-1 | 21.37 |
| | | | 100 | 0 | | | | | | 75 | 0 | | | 0-2 | 20.8 |
| | | | 1 | 0 | | | | | | 1 | 74 | | | 0-8.5 | 15.94 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 18.27 |
| | | | 1 | 99 | | | | | | 1 | 0 | | | 0 | 22.59 |
| | | | 100 | 0 | | | | | | 1 | 74 | | | 0-3.5 | 19.14 |
| 41 | 20 | QPSK | 0 | 0 | 40620 | 2593 | 41 | 15 | QPSK | 1 | 74 | 40791 | 2610.1 | 0 | 23.1 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 0 | 23.59 |
| | | | 100 | 0 | | | | | | 0 | 0 | | | 0-1 | 22.86 |
| | | | 100 | 0 | | | | | | 75 | 0 | | | 0-2 | 21.36 |
| | | | 1 | 0 | | | | | | 1 | 74 | | | 0-8.5 | 15.52 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 20.42 |
| | | | 1 | 99 | | | | | | 1 | 0 | | | 0 | 22.59 |
| | | | 100 | 0 | | | | | | 1 | 74 | | | 0-3.5 | 18.86 |
| 41 | 20 | QPSK | 0 | 0 | 41344 | 2665.4 | 41 | 15 | QPSK | 1 | 74 | 41515 | 2682.5 | 0 | 22.84 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 0 | 22.68 |
| | | | 100 | 0 | | | | | | 0 | 0 | | | 0-1 | 22.61 |
| | | | 100 | 0 | | | | | | 75 | 0 | | | 0-2 | 20.69 |
| | | | 1 | 0 | | | | | | 1 | 74 | | | 0-8.5 | 14.74 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 19.59 |
| | | | 1 | 99 | | | | | | 1 | 0 | | | 0 | 22.79 |
| | | | 100 | 0 | | | | | | 1 | 74 | | | 0-3.5 | 18.59 |

LTE CA_41C (PCC/SCC: 20M+20M)

| Intra Band-Contiguous CA | | | | | | | | | | | | | | | |
|--------------------------|----------|------------|---------|-----------|------------|--------------------|------|----------|------------|---------|-----------|------------|--------------------|----------------|---|
| PCC | | | | | | | | SCC | | | | | | MPR | |
| Band | BW (MHz) | Modulation | RB Size | RB Offset | UL Channel | UL Frequency (MHz) | Band | BW (MHz) | Modulation | RB Size | RB Offset | UL Channel | UL Frequency (MHz) | MPR Level (dB) | Tx Power with UL-CA Active (dBm) Level (dB) |
| 41 | 20 | QPSK | 0 | 0 | 39750 | 2506 | 41 | 20 | QPSK | 1 | 99 | 39948 | 2525.8 | 0 | 22.91 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 22.78 | |
| | | | 100 | 0 | | | | | | 0 | 0 | | | 0-1 | 22.2 |
| | | | 100 | 0 | | | | | | 100 | 0 | | | 0-2 | 21.58 |
| | | | 1 | 0 | | | | | | 1 | 99 | | | 0-8.5 | 15.08 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 18.75 |
| | | | 1 | 99 | | | | | | 1 | 0 | | | 0 | 23.02 |
| | | | 100 | 0 | | | | | | 1 | 99 | | | 0-3.5 | 19.11 |
| 41 | 20 | QPSK | 0 | 0 | 40620 | 2593 | 41 | 20 | QPSK | 1 | 99 | 40818 | 2612.8 | 0 | 23.14 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 22.7 | |
| | | | 100 | 0 | | | | | | 0 | 0 | | | 0-1 | 22.91 |
| | | | 100 | 0 | | | | | | 100 | 0 | | | 0-2 | 21.82 |
| | | | 1 | 0 | | | | | | 1 | 99 | | | 0-8.5 | 15.26 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 19.32 |
| | | | 1 | 99 | | | | | | 1 | 0 | | | 0 | 22.86 |
| | | | 100 | 0 | | | | | | 1 | 99 | | | 0-3.5 | 19.32 |
| 41 | 20 | QPSK | 0 | 0 | 41292 | 2660.2 | 41 | 20 | QPSK | 1 | 99 | 41490 | 2680 | 0 | 23.25 |
| | | | 1 | 0 | | | | | | 0 | 0 | | | 23.94 | |
| | | | 100 | 0 | | | | | | 0 | 0 | | | 0-1 | 22.47 |
| | | | 100 | 0 | | | | | | 100 | 0 | | | 0-2 | 21.15 |
| | | | 1 | 0 | | | | | | 1 | 99 | | | 0-8.5 | 15.28 |
| | | | 1 | 0 | | | | | | 1 | 0 | | | 0-4.5 | 19.75 |
| | | | 1 | 99 | | | | | | 1 | 0 | | | 0 | 23.5 |
| | | | 100 | 0 | | | | | | 1 | 99 | | | 0-3.5 | 18.31 |

LTE Band 66

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|-----------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 131979 | 132322 | 132665 | | 131979 | 132322 | 132665 | | 131979 | 132322 | 132665 | |
| | | | 1710.7 | 1745 | 1779.3 | | 1710.7 | 1745 | 1779.3 | | 1710.7 | 1745 | 1779.3 | |
| | | | MHz | MHz | MHz | | MHz | MHz | MHz | | MHz | MHz | MHz | |
| 66 / 1.4M | 1 | 0 | 23.45 | 23.79 | 23.69 | 0 | 22.03 | 22.69 | 22.53 | 1 | 21.46 | 21.41 | 21.52 | 2 |
| | 1 | 2 | 23.48 | 23.40 | 23.58 | 0 | 22.31 | 22.25 | 22.03 | 1 | 21.43 | 21.24 | 21.56 | 2 |
| | 1 | 5 | 23.50 | 23.38 | 23.50 | 0 | 22.11 | 22.47 | 22.10 | 1 | 21.16 | 21.46 | 21.10 | 2 |
| | 3 | 0 | 23.10 | 23.54 | 23.10 | 0 | 22.32 | 22.27 | 22.49 | 1 | 21.51 | 21.58 | 21.04 | 2 |
| | 3 | 1 | 23.17 | 23.46 | 23.53 | 0 | 22.63 | 22.26 | 22.03 | 1 | 21.08 | 21.37 | 21.45 | 2 |
| | 3 | 3 | 23.21 | 23.21 | 23.22 | 0 | 22.34 | 22.64 | 22.32 | 1 | 21.15 | 21.68 | 21.35 | 2 |
| | 6 | 0 | 22.56 | 22.65 | 22.30 | 1 | 21.32 | 21.62 | 21.53 | 2 | 20.58 | 20.31 | 20.25 | 3 |

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|-----------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 131987 | 132322 | 132657 | | 131987 | 132322 | 132657 | | 131987 | 132322 | 132657 | |
| | | | 1711.5 | 1745 | 1778.5 | | 1711.5 | 1745 | 1778.5 | | 1711.5 | 1745 | 1778.5 | |
| | | | MHz | MHz | MHz | | MHz | MHz | MHz | | MHz | MHz | MHz | |
| 66 / 3M | 1 | 0 | 23.88 | 23.44 | 23.29 | 0 | 22.07 | 22.50 | 22.59 | 1 | 21.31 | 21.19 | 21.34 | 2 |
| | 1 | 7 | 23.81 | 23.24 | 23.72 | 0 | 22.66 | 22.20 | 22.65 | 1 | 21.34 | 21.58 | 21.43 | 2 |
| | 1 | 14 | 23.52 | 23.70 | 23.29 | 0 | 22.04 | 22.48 | 22.55 | 1 | 21.31 | 21.50 | 21.63 | 2 |
| | 8 | 0 | 22.51 | 22.28 | 22.44 | 1 | 21.64 | 21.30 | 21.39 | 2 | 20.26 | 20.38 | 20.46 | 3 |
| | 8 | 3 | 22.10 | 22.29 | 22.62 | 1 | 21.61 | 20.99 | 21.39 | 2 | 20.45 | 20.28 | 20.10 | 3 |
| | 8 | 7 | 22.23 | 22.39 | 22.38 | 1 | 21.36 | 21.60 | 21.22 | 2 | 20.57 | 20.24 | 20.54 | 3 |
| | 15 | 0 | 22.24 | 22.64 | 22.63 | 1 | 21.60 | 21.24 | 21.44 | 2 | 20.46 | 20.62 | 20.56 | 3 |

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|-----------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 131997 | 132322 | 132647 | | 131997 | 132322 | 132647 | | 131997 | 132322 | 132647 | |
| | | | 1712.5 | 1745 | 1777.5 | | 1712.5 | 1745 | 1777.5 | | 1712.5 | 1745 | 1777.5 | |
| | | | MHz | MHz | MHz | | MHz | MHz | MHz | | MHz | MHz | MHz | |
| 66 / 5M | 1 | 0 | 23.58 | 23.82 | 23.30 | 0 | 22.51 | 22.32 | 22.66 | 1 | 21.45 | 21.73 | 21.12 | 2 |
| | 1 | 12 | 23.36 | 23.75 | 23.54 | 0 | 22.50 | 22.31 | 22.69 | 1 | 21.44 | 21.62 | 21.38 | 2 |
| | 1 | 24 | 23.60 | 23.76 | 23.38 | 0 | 22.27 | 22.39 | 22.16 | 1 | 21.14 | 21.49 | 21.26 | 2 |
| | 12 | 0 | 22.25 | 22.29 | 22.23 | 1 | 21.35 | 21.17 | 21.56 | 2 | 20.49 | 20.56 | 20.45 | 3 |
| | 12 | 6 | 22.59 | 22.43 | 22.56 | 1 | 21.48 | 21.48 | 21.64 | 2 | 20.22 | 20.03 | 20.15 | 3 |
| | 12 | 13 | 22.63 | 22.19 | 22.34 | 1 | 21.72 | 21.12 | 21.59 | 2 | 20.29 | 20.51 | 20.49 | 3 |
| | 25 | 0 | 22.07 | 22.18 | 22.55 | 1 | 21.09 | 21.19 | 21.22 | 2 | 20.46 | 20.38 | 20.45 | 3 |

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|-----------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 132022 | 132322 | 132622 | | 132022 | 132322 | 132622 | | 132022 | 132322 | 132622 | |
| | | | 1715 | 1745 | 1775 | | 1715 | 1745 | 1775 | | 1715 | 1745 | 1775 | |
| | | | MHz | MHz | MHz | | MHz | MHz | MHz | | MHz | MHz | MHz | |
| 66 / 10M | 1 | 0 | 23.30 | 23.37 | 23.85 | 0 | 22.67 | 22.55 | 22.59 | 1 | 21.44 | 21.45 | 21.60 | 2 |
| | 1 | 24 | 23.39 | 23.59 | 23.35 | 0 | 22.52 | 22.35 | 22.19 | 1 | 21.29 | 21.10 | 21.50 | 2 |
| | 1 | 49 | 23.33 | 23.82 | 23.57 | 0 | 22.45 | 22.13 | 21.26 | 1 | 21.43 | 21.59 | 21.66 | 2 |
| | 25 | 0 | 22.29 | 22.20 | 22.50 | 1 | 21.60 | 21.18 | 21.60 | 2 | 20.09 | 20.31 | 20.13 | 3 |
| | 25 | 12 | 22.44 | 22.14 | 22.33 | 1 | 21.13 | 21.68 | 21.24 | 2 | 20.49 | 20.36 | 20.39 | 3 |
| | 25 | 25 | 22.35 | 22.54 | 22.43 | 1 | 21.53 | 21.57 | 21.48 | 2 | 20.30 | 20.04 | 20.24 | 3 |
| | 50 | 0 | 22.55 | 22.58 | 22.23 | 1 | 21.10 | 21.57 | 21.15 | 2 | 20.43 | 20.38 | 20.43 | 3 |

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|-----------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 132047 | 132322 | 132597 | | 132047 | 132322 | 132597 | | 132047 | 132322 | 132597 | |
| | | | 1717.5 | 1745 | 1772.5 | | 1717.5 | 1745 | 1772.5 | | 1717.5 | 1745 | 1772.5 | |
| | | | MHz | MHz | MHz | | MHz | MHz | MHz | | MHz | MHz | MHz | |
| 66 / 15M | 1 | 0 | 23.38 | 23.81 | 23.73 | 0 | 22.59 | 22.64 | 22.17 | 1 | 21.33 | 21.50 | 21.74 | 2 |
| | 1 | 37 | 23.33 | 23.41 | 23.63 | 0 | 22.46 | 22.42 | 22.42 | 1 | 21.39 | 21.39 | 21.47 | 2 |
| | 1 | 74 | 23.54 | 23.78 | 23.33 | 0 | 22.57 | 22.51 | 22.08 | 1 | 21.62 | 21.28 | 21.45 | 2 |
| | 36 | 0 | 22.67 | 22.51 | 22.08 | 1 | 21.52 | 21.11 | 21.53 | 2 | 20.27 | 20.28 | 20.52 | 3 |
| | 36 | 19 | 22.35 | 22.68 | 22.64 | 1 | 21.27 | 21.63 | 21.43 | 2 | 20.08 | 20.51 | 20.35 | 3 |
| | 36 | 39 | 22.58 | 22.36 | 22.65 | 1 | 21.15 | 21.10 | 21.34 | 2 | 20.15 | 20.17 | 20.38 | 3 |
| | 75 | 0 | 22.20 | 22.70 | 22.40 | 1 | 21.20 | 21.45 | 21.11 | 2 | 20.05 | 20.28 | 20.43 | 3 |

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|-----------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 132072 | 132322 | 132572 | | 132072 | 132322 | 132572 | | 132072 | 132322 | 132572 | |
| | | | 1720 | 1745 | 1770 | | 1720 | 1745 | 1770 | | 1720 | 1745 | 1770 | |
| | | | MHz | MHz | MHz | | MHz | MHz | MHz | | MHz | MHz | MHz | |
| 66 / 20M | 1 | 0 | 23.62 | 23.84 | 23.74 | 0 | 22.44 | 22.26 | 22.56 | 1 | 21.27 | 21.65 | 21.17 | 2 |
| | 1 | 50 | 23.76 | 23.35 | 23.46 | 0 | 22.15 | 22.11 | 22.23 | 1 | 21.10 | 21.18 | 21.24 | 2 |
| | 1 | 99 | 23.31 | 23.82 | 23.56 | 0 | 21.96 | 22.44 | 22.33 | 1 | 21.46 | 21.09 | 21.74 | 2 |
| | 50 | 0 | 22.36 | 22.11 | 22.35 | 1 | 21.21 | 21.27 | 21.36 | 2 | 20.21 | 20.48 | 20.27 | 3 |
| | 50 | 25 | 22.34 | 22.51 | 22.32 | 1 | 21.49 | 21.28 | 21.29 | 2 | 20.17 | 20.29 | 20.15 | 3 |
| | 50 | 50 | 22.20 | 22.16 | 22.26 | 1 | 21.56 | 21.46 | 21.41 | 2 | 20.31 | 20.48 | 20.29 | 3 |
| | 100 | 0 | 22.26 | 22.43 | 22.14 | 1 | 21.37 | 21.21 | 21.13 | 2 | 20.39 | 20.24 | 20.18 | 3 |

EIRP / ERP POWER

| Band | WCDMA B4 | | |
|----------------------|----------|--------|--------|
| Channel | 1312 | 1413 | 1513 |
| Rx Channel | 1537 | 1638 | 1738 |
| Frequency (MHz) | 1712.4 | 1732.6 | 1752.6 |
| RMC 12.2K | 23.64 | 23.72 | 23.99 |
| Gain (dBi) | 5.99 | 5.99 | 5.99 |
| Max EIRP Power (dBm) | 29.63 | 29.71 | 29.98 |

LTE Band 4

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|----------------------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 19957 | 20175 | 20393 | | 19957 | 20175 | 20393 | | 19957 | 20175 | 20393 | |
| | | | 1710.7 | 1732.5 | 1754.3 | | 1710.7 | 1732.5 | 1754.3 | | 1710.7 | 1732.5 | 1754.3 | |
| | | | MHz | MHz | MHz | MHz | MHz | MHz | MHz | MHz | MHz | | | |
| 4 / 1.4M | 1 | 0 | 23.89 | 23.67 | 23.29 | 0 | 22.20 | 22.73 | 22.41 | 1 | 21.44 | 21.40 | 21.28 | 2 |
| Gain (dBi) | | | 5.99 | 5.99 | 5.99 | | 5.99 | 5.99 | 5.99 | | 5.99 | 5.99 | 5.99 | |
| Max EIRP Power (dBm) | | | 29.88 | 29.66 | 29.28 | | 28.19 | 28.72 | 28.40 | | 27.43 | 27.39 | 27.27 | |

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|----------------------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 19965 | 20175 | 20385 | | 19965 | 20175 | 20385 | | 19965 | 20175 | 20385 | |
| | | | 1711.5 | 1732.5 | 1753.5 | | 1711.5 | 1732.5 | 1753.5 | | 1711.5 | 1732.5 | 1753.5 | |
| | | | MHz | MHz | MHz | MHz | MHz | MHz | MHz | MHz | | | | |
| 4 / 3M | 1 | 0 | 23.38 | 23.71 | 23.56 | 0 | 22.47 | 22.71 | 22.58 | 1 | 21.60 | 21.68 | 21.45 | 2 |
| Gain (dBi) | | | 5.99 | 5.99 | 5.99 | | 5.99 | 5.99 | 5.99 | | 5.99 | 5.99 | | |
| Max EIRP Power (dBm) | | | 29.37 | 29.70 | 29.55 | | 28.46 | 28.70 | 28.57 | | 27.59 | 27.67 | 27.44 | |

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|----------------------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 19975 | 20175 | 20375 | | 19975 | 20175 | 20375 | | 19975 | 20175 | 20375 | |
| | | | 1712.5 | 1732.5 | 1752.5 | | 1712.5 | 1732.5 | 1752.5 | | 1712.5 | 1732.5 | 1752.5 | |
| | | | MHz | MHz | MHz | MHz | MHz | MHz | MHz | MHz | | | | |
| 4 / 5M | 1 | 0 | 23.56 | 23.63 | 23.62 | 0 | 22.52 | 22.79 | 22.68 | 1 | 21.39 | 21.50 | 21.62 | 2 |
| Gain (dBi) | | | 5.99 | 5.99 | 5.99 | | 5.99 | 5.99 | 5.99 | | 5.99 | 5.99 | | |
| Max EIRP Power (dBm) | | | 29.55 | 29.62 | 29.61 | | 28.51 | 28.78 | 28.67 | | 27.38 | 27.49 | 27.61 | |

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|----------------------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 20000 | 20175 | 20350 | | 20000 | 20175 | 20350 | | 20000 | 20175 | 20350 | |
| | | | 1715 | 1732.5 | 1750 | | 1715 | 1732.5 | 1750 | | 1715 | 1732.5 | 1750 | |
| | | | MHz | MHz | MHz | MHz | MHz | MHz | MHz | MHz | | | | |
| 4 / 10M | 1 | 0 | 23.28 | 23.65 | 23.82 | 0 | 22.92 | 22.92 | 22.67 | 1 | 21.84 | 21.54 | 21.58 | 2 |
| Gain (dBi) | | | 5.99 | 5.99 | 5.99 | | 5.99 | 5.99 | 5.99 | | 5.99 | 5.99 | | |
| Max EIRP Power (dBm) | | | 29.27 | 29.64 | 29.81 | | 28.91 | 28.91 | 28.66 | | 27.83 | 27.53 | 27.57 | |

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|----------------------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 20025 | 20175 | 20325 | | 20025 | 20175 | 20325 | | 20025 | 20175 | 20325 | |
| | | | 1717.5 | 1732.5 | 1747.5 | | 1717.5 | 1732.5 | 1747.5 | | 1717.5 | 1732.5 | 1747.5 | |
| | | | MHz | MHz | MHz | MHz | MHz | MHz | MHz | MHz | MHz | | | |
| 4 / 15M | 1 | 0 | 23.52 | 23.88 | 23.59 | 0 | 22.86 | 22.89 | 22.44 | 1 | 21.32 | 21.67 | 21.80 | 2 |
| Gain (dBi) | | | 5.99 | 5.99 | 5.99 | | 5.99 | 5.99 | 5.99 | | 5.99 | 5.99 | 5.99 | |
| Max EIRP Power (dBm) | | | 29.51 | 29.87 | 29.58 | | 28.85 | 28.88 | 28.43 | | 27.31 | 27.66 | 27.79 | |

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|----------------------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 20050 | 20175 | 20300 | | 20050 | 20175 | 20300 | | 20050 | 20175 | 20300 | |
| | | | 1720 | 1732.5 | 1745 | | 1720 | 1732.5 | 1745 | | 1720 | 1732.5 | 1745 | |
| | | | MHz | MHz | MHz | MHz | MHz | MHz | MHz | MHz | | | | |
| 4 / 20M | 1 | 0 | 23.37 | 23.86 | 23.62 | 0 | 22.41 | 22.74 | 22.68 | 1 | 21.43 | 21.46 | 21.70 | 2 |
| Gain (dBi) | | | 5.99 | 5.99 | 5.99 | | 5.99 | 5.99 | 5.99 | | 5.99 | 5.99 | | |
| Max EIRP Power (dBm) | | | 29.36 | 29.85 | 29.61 | | 28.40 | 28.73 | 28.67 | | 27.42 | 27.45 | 27.69 | |

LTE Band 7

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|----------------------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 20775 | 21100 | 21425 | | 20775 | 21100 | 21425 | | 20775 | 21100 | 21425 | |
| | | | MHz | MHz | MHz | | MHz | MHz | MHz | | MHz | MHz | MHz | |
| 7 / 5M | 1 | 0 | 23.49 | 23.68 | 23.26 | 0 | 22.19 | 22.17 | 22.50 | 1 | 21.02 | 21.30 | 21.57 | 2 |
| Gain (dBi) | | 5.2 | 5.2 | 5.2 | 5.2 | | 5.2 | 5.2 | 5.2 | | | | | |
| Max EIRP Power (dBm) | | 28.69 | 28.88 | 28.46 | 27.39 | | 27.37 | 27.70 | 26.22 | | 26.50 | 26.77 | | |

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|----------------------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 20800 | 21100 | 21400 | | 20800 | 21100 | 21400 | | 20800 | 21100 | 21400 | |
| | | | MHz | MHz | MHz | | MHz | MHz | MHz | | MHz | MHz | MHz | |
| 7 / 10M | 1 | 0 | 23.37 | 23.81 | 23.32 | 0 | 22.40 | 22.48 | 22.45 | 1 | 21.53 | 21.62 | 21.35 | 2 |
| Gain (dBi) | | 5.2 | 5.2 | 5.2 | 5.2 | | 5.2 | 5.2 | 5.2 | | | | | |
| Max EIRP Power (dBm) | | 28.57 | 29.01 | 28.52 | 27.60 | | 27.68 | 27.65 | 26.73 | | 26.82 | 26.55 | | |

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|----------------------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 20825 | 21100 | 21375 | | 20825 | 21100 | 21375 | | 20825 | 21100 | 21375 | |
| | | | MHz | MHz | MHz | | MHz | MHz | MHz | | MHz | MHz | MHz | |
| 7 / 15M | 1 | 0 | 23.67 | 23.82 | 23.62 | 0 | 22.28 | 22.63 | 22.23 | 1 | 21.50 | 21.78 | 21.28 | 2 |
| Gain (dBi) | | 5.2 | 5.2 | 5.2 | 5.2 | | 5.2 | 5.2 | 5.2 | | | | | |
| Max EIRP Power (dBm) | | 28.87 | 29.02 | 28.82 | 27.48 | | 27.83 | 27.43 | 26.70 | | 26.98 | 26.48 | | |

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|----------------------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 20850 | 21100 | 21350 | | 20850 | 21100 | 21350 | | 20850 | 21100 | 21350 | |
| | | | MHz | MHz | MHz | | MHz | MHz | MHz | | MHz | MHz | MHz | |
| 7 / 20M | 1 | 0 | 23.85 | 23.32 | 23.32 | 0 | 22.34 | 22.63 | 22.29 | 1 | 21.43 | 21.52 | 21.65 | 2 |
| Gain (dBi) | | 5.2 | 5.2 | 5.2 | 5.2 | | 5.2 | 5.2 | 5.2 | | | | | |
| Max EIRP Power (dBm) | | 29.05 | 28.52 | 28.52 | 27.54 | | 27.83 | 27.49 | 26.63 | | 26.72 | 26.85 | | |

LTE CA_7C (PCC/SCC: 15M+20M)

| Channel Number | Freq. (MHz) | QPSK | | | | | | | |
|----------------|-------------|-----------|--------|-----------|--------|-----------------|------|-----------|----------|
| | | PCC | | SCC | | Conducted Power | Gain | EIRP(dBm) | EIRP(mW) |
| | | RB Number | RB Set | RB Number | RB Set | Chain 0 | | | |
| 21100+21271 | 2535+2552.1 | 1 | 0 | 0 | 0 | 23.50 | 5.20 | 28.70 | 741.31 |

LTE CA_7C (PCC/SCC: 20M+20M)

| Channel Number | Freq. (MHz) | QPSK | | | | | | | |
|----------------|-------------|-----------|--------|-----------|--------|-----------------|------|-----------|----------|
| | | PCC | | SCC | | Conducted Power | Gain | EIRP(dBm) | EIRP(mW) |
| | | RB Number | RB Set | RB Number | RB Set | Chain 0 | | | |
| 21152+21350 | 2540.2+2560 | 100 | 0 | 100 | 0 | 20.56 | 5.20 | 25.76 | 376.70 |

LTE Band 12

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) | |
|----------------------------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | |
| | | | 23017 | 23095 | 23173 | | 23017 | 23095 | 23173 | | 23017 | 23095 | 23173 | | |
| | | | 699.7 | 707.5 | 715.3 | | 699.7 | 707.5 | 715.3 | | 699.7 | 707.5 | 715.3 | | |
| | | | MHz | MHz | MHz | | | | MHz | MHz | MHz | | | | |
| 12 / 1.4M | 1 | 0 | 23.91 | 23.64 | 23.64 | 0 | 22.56 | 22.89 | 22.88 | 1 | 21.66 | 21.72 | 21.42 | 2 | |
| Gain (dBi) | | | 4.17 | 4.17 | 4.17 | | 4.17 | 4.17 | 4.17 | | 4.17 | 4.17 | 4.17 | | 4.17 |
| Isotropically Factor (dBc) | | | 2.15 | 2.15 | 2.15 | | 2.15 | 2.15 | 2.15 | | 2.15 | 2.15 | 2.15 | | 2.15 |
| Max ERP Power (dBm) | | | 25.93 | 25.66 | 25.66 | | 24.58 | 24.91 | 24.90 | | 23.68 | 23.74 | 23.44 | | |

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|----------------------------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 23025 | 23095 | 23165 | | 23025 | 23095 | 23165 | | 23025 | 23095 | 23165 | |
| | | | 700.5 | 707.5 | 714.5 | | 700.5 | 707.5 | 714.5 | | 700.5 | 707.5 | 714.5 | |
| | | | MHz | MHz | MHz | | | | MHz | MHz | MHz | | | |
| 12 / 3M | 1 | 0 | 23.71 | 23.89 | 23.67 | 0 | 22.55 | 22.52 | 22.74 | 1 | 21.77 | 21.74 | 21.94 | 2 |
| Gain (dBi) | | | 4.17 | 4.17 | 4.17 | | 4.17 | 4.17 | 4.17 | | 4.17 | 4.17 | 4.17 | |
| Isotropically Factor (dBc) | | | 2.15 | 2.15 | 2.15 | | 2.15 | 2.15 | 2.15 | | 2.15 | 2.15 | 2.15 | |
| Max ERP Power (dBm) | | | 25.73 | 25.91 | 25.69 | | 24.57 | 24.54 | 24.76 | | 23.79 | 23.76 | 23.96 | |

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|----------------------------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 23035 | 23095 | 23155 | | 23035 | 23095 | 23155 | | 23035 | 23095 | 23155 | |
| | | | 701.5 | 707.5 | 713.5 | | 701.5 | 707.5 | 713.5 | | 701.5 | 707.5 | 713.5 | |
| | | | MHz | MHz | MHz | | | | MHz | MHz | MHz | | | |
| 12 / 5M | 1 | 0 | 23.62 | 23.92 | 23.63 | 0 | 22.75 | 22.77 | 22.91 | 1 | 21.63 | 21.64 | 21.97 | 2 |
| Gain (dBi) | | | 4.17 | 4.17 | 4.17 | | 4.17 | 4.17 | 4.17 | | 4.17 | 4.17 | 4.17 | |
| Isotropically Factor (dBc) | | | 2.15 | 2.15 | 2.15 | | 2.15 | 2.15 | 2.15 | | 2.15 | 2.15 | 2.15 | |
| Max ERP Power (dBm) | | | 25.64 | 25.94 | 25.65 | | 24.77 | 24.79 | 24.93 | | 23.65 | 23.66 | 23.99 | |

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) | |
|-------------------------------|------------|--------------|-----------|-----------|------------|---------------------|-----------|-----------|------------|---------------------|-----------|-----------|------------|---------------------|------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | |
| | | | 23060 | 23095 | 23130 | | 23060 | 23095 | 23130 | | 23060 | 23095 | 23130 | | |
| | | | 704 | 707.5 | 711 | | 704 | 707.5 | 711 | | 704 | 707.5 | 711 | | |
| | | | MHz | MHz | MHz | | | | MHz | MHz | MHz | | | | |
| 12 / 10M | 1 | 0 | 24.02 | 23.55 | 23.63 | 0 | 22.58 | 22.56 | 22.57 | 1 | 21.58 | 21.96 | 21.83 | 2 | |
| Gain (dBi) | | | 4.17 | 4.17 | 4.17 | | 4.17 | 4.17 | 4.17 | | 4.17 | 4.17 | 4.17 | | 4.17 |
| Isotropically Factor (dBc) | | | 2.15 | 2.15 | 2.15 | | 2.15 | 2.15 | 2.15 | | 2.15 | 2.15 | 2.15 | | 2.15 |
| Max ERP Power (dBm) | | | 26.04 | 25.57 | 25.65 | | 24.60 | 24.58 | 24.59 | | 23.60 | 23.98 | 23.85 | | |

LTE Band 13

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) | |
|----------------------------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | |
| | | | 23205 | 23230 | 23255 | | 23205 | 23230 | 23255 | | 23205 | 23230 | 23255 | | |
| | | | 779.5 | 782 | 784.5 | | 779.5 | 782 | 784.5 | | 779.5 | 782 | 784.5 | | |
| | | | MHz | MHz | MHz | MHz | MHz | MHz | MHz | MHz | MHz | | | | |
| 13 / 5M | 1 | 0 | 23.60 | 24.08 | 23.96 | 0 | 22.31 | 22.58 | 22.77 | 1 | 21.45 | 21.91 | 21.54 | 2 | |
| Gain (dBi) | | | 3.05 | 3.05 | 3.05 | | 3.05 | 3.05 | 3.05 | | 3.05 | 3.05 | 3.05 | | 3.05 |
| Isotropically Factor (dBc) | | | 2.15 | 2.15 | 2.15 | | 2.15 | 2.15 | 2.15 | | 2.15 | 2.15 | 2.15 | | 2.15 |
| Max ERP Power (dBm) | | | 24.50 | 24.98 | 24.86 | | 23.21 | 23.48 | 23.67 | | 22.35 | 22.81 | 22.44 | | |

| Band / BW | RB Size | RB Offset | QPSK | | 3GPP MPR (dB) | 16QAM | | 3GPP MPR (dB) | 64QAM | | 3GPP MPR (dB) |
|----------------------------|---------|-----------|--------|-------|---------------|--------|-------|---------------|--------|-------|---------------|
| | | | Mid CH | 23230 | | Mid CH | 23230 | | Mid CH | 23230 | |
| | | | 782 | 782 | | 782 | 782 | | 782 | | |
| | | | MHz | MHz | | MHz | MHz | | MHz | | |
| 13 / 10M | 1 | 0 | 23.83 | | 0 | 22.44 | | 1 | 21.44 | | 2 |
| Gain (dBi) | | | 3.05 | | | 3.05 | | | 3.05 | | |
| Isotropically Factor (dBc) | | | 2.15 | | | 2.15 | | | 2.15 | | |
| Max ERP Power (dBm) | | | 24.73 | | | 23.34 | | | 22.34 | | |

LTE Band 17

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) | |
|----------------------------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | |
| | | | 23755 | 23790 | 23825 | | 23755 | 23790 | 23825 | | 23755 | 23790 | 23825 | | |
| | | | 706.5 | 710 | 713.5 | | 706.5 | 710 | 713.5 | | 706.5 | 710 | 713.5 | | |
| | | | MHz | MHz | MHz | MHz | MHz | MHz | MHz | MHz | MHz | | | | |
| 17 / 5M | 1 | 0 | 23.91 | 23.64 | 23.59 | 0 | 22.59 | 22.94 | 22.78 | 1 | 21.73 | 21.53 | 21.93 | 2 | |
| Gain (dBi) | | | 4.17 | 4.17 | 4.17 | | 4.17 | 4.17 | 4.17 | | 4.17 | 4.17 | 4.17 | | 4.17 |
| Isotropically Factor (dBc) | | | 2.15 | 2.15 | 2.15 | | 2.15 | 2.15 | 2.15 | | 2.15 | 2.15 | 2.15 | | 2.15 |
| Max ERP Power (dBm) | | | 25.93 | 25.66 | 25.61 | | 24.61 | 24.96 | 24.80 | | 23.75 | 23.55 | 23.95 | | |

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|----------------------------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 23780 | 23790 | 23800 | | 23780 | 23790 | 23800 | | 23780 | 23790 | 23800 | |
| | | | 709 | 710 | 711 | | 709 | 710 | 711 | | 709 | 710 | 711 | |
| | | | MHz | MHz | MHz | MHz | MHz | MHz | MHz | MHz | MHz | | | |
| 17 / 10M | 1 | 0 | 23.83 | 24.08 | 23.82 | 0 | 22.81 | 22.88 | 22.86 | 1 | 21.92 | 21.48 | 21.59 | 2 |
| Gain (dBi) | | | 4.17 | 4.17 | 4.17 | | 4.17 | 4.17 | 4.17 | | 4.17 | 4.17 | 4.17 | |
| Isotropically Factor (dBc) | | | 2.15 | 2.15 | 2.15 | | 2.15 | 2.15 | 2.15 | | 2.15 | 2.15 | 2.15 | |
| Max ERP Power (dBm) | | | 25.85 | 26.10 | 25.84 | | 24.83 | 24.90 | 24.88 | | 23.94 | 23.50 | 23.61 | |

LTE Band 38

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|----------------------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 37775 | 38000 | 38225 | | 37775 | 38000 | 38225 | | 37775 | 38000 | 38225 | |
| | | | 2572.5 | 2595 | 2617.5 | | 2572.5 | 2595 | 2617.5 | | 2572.5 | 2595 | 2617.5 | |
| | | | MHz | MHz | MHz | MHz | MHz | MHz | MHz | MHz | MHz | | | |
| 38 / 5M | 1 | 24 | 23.81 | 23.63 | 23.31 | 0 | 21.09 | 22.38 | 22.64 | 1 | 20.27 | 21.20 | 21.52 | 2 |
| Gain (dBi) | | | 4.82 | 4.82 | 4.82 | | 4.82 | 4.82 | 4.82 | | 4.82 | 4.82 | 4.82 | |
| Max EIRP Power (dBm) | | | 28.63 | 28.45 | 28.13 | | 25.91 | 27.20 | 27.46 | | 25.09 | 26.02 | 26.34 | |

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|----------------------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 37800 | 38000 | 38200 | | 37800 | 38000 | 38200 | | 37800 | 38000 | 38200 | |
| | | | 2575 | 2595 | 2615 | | 2575 | 2595 | 2615 | | 2575 | 2595 | 2615 | |
| | | | MHz | MHz | MHz | MHz | MHz | MHz | MHz | MHz | | | | |
| 38 / 10M | 1 | 49 | 23.71 | 23.59 | 23.35 | 0 | 22.89 | 21.93 | 22.93 | 1 | 21.37 | 21.45 | 21.62 | 2 |
| Gain (dBi) | | | 4.82 | 4.82 | 4.82 | | 4.82 | 4.82 | 4.82 | | 4.82 | 4.82 | | |
| Max EIRP Power (dBm) | | | 28.53 | 28.41 | 28.17 | | 27.71 | 26.75 | 27.75 | | 26.19 | 26.27 | 26.44 | |

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|----------------------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 37825 | 38000 | 38175 | | 37825 | 38000 | 38175 | | 37825 | 38000 | 38175 | |
| | | | 2577.5 | 2595 | 2612.5 | | 2577.5 | 2595 | 2612.5 | | 2577.5 | 2595 | 2612.5 | |
| | | | MHz | MHz | MHz | MHz | MHz | MHz | MHz | MHz | | | | |
| 38 / 15M | 1 | 0 | 23.57 | 23.38 | 23.79 | 0 | 21.94 | 23.56 | 22.11 | 1 | 21.19 | 22.29 | 21.69 | 2 |
| Gain (dBi) | | | 4.82 | 4.82 | 4.82 | | 4.82 | 4.82 | 4.82 | | 4.82 | 4.82 | | |
| Max EIRP Power (dBm) | | | 28.39 | 28.20 | 28.61 | | 26.76 | 28.38 | 26.93 | | 26.01 | 27.11 | 26.51 | |

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|----------------------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 37850 | 38000 | 38150 | | 37850 | 38000 | 38150 | | 37850 | 38000 | 38150 | |
| | | | 2580 | 2595 | 2610 | | 2580 | 2595 | 2610 | | 2580 | 2595 | 2610 | |
| | | | MHz | MHz | MHz | MHz | MHz | MHz | MHz | MHz | | | | |
| 38 / 20M | 1 | 50 | 23.60 | 23.59 | 23.41 | 0 | 22.31 | 22.59 | 22.72 | 1 | 21.62 | 21.57 | 21.41 | 2 |
| Gain (dBi) | | | 4.82 | 4.82 | 4.82 | | 4.82 | 4.82 | 4.82 | | 4.82 | 4.82 | | |
| Max EIRP Power (dBm) | | | 28.42 | 28.41 | 28.23 | | 27.13 | 27.41 | 27.54 | | 26.44 | 26.39 | 26.23 | |

LTE CA_38C (PCC/SCC: 15M+15M)

| Channel Number | Freq. (MHz) | QPSK | | | | | | | |
|----------------|---------------|-----------|--------|-----------|--------|-----------------|------|-----------|----------|
| | | PCC | | SCC | | Conducted Power | Gain | EIRP(dBm) | EIRP(mW) |
| | | RB Number | RB Set | RB Number | RB Set | Chain 0 | | | |
| 37825+37975 | 2577.5+2592.5 | 1 | 0 | 0 | 0 | 23.23 | 4.82 | 28.05 | 638.26 |

LTE CA_38C (PCC/SCC: 20M+20M)

| Channel Number | Freq. (MHz) | QPSK | | | | | | | |
|----------------|-------------|-----------|--------|-----------|--------|-----------------|------|-----------|----------|
| | | PCC | | SCC | | Conducted Power | Gain | EIRP(dBm) | EIRP(mW) |
| | | RB Number | RB Set | RB Number | RB Set | Chain 0 | | | |
| 37952+38150 | 2590.2+2610 | 100 | 0 | 100 | 0 | 21.18 | 4.82 | 26.00 | 398.11 |

LTE Band 41

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|----------------------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 39675 | 40620 | 41565 | | 39675 | 40620 | 41565 | | 39675 | 40620 | 41565 | |
| | | | MHz | MHz | MHz | | MHz | MHz | MHz | | MHz | MHz | MHz | |
| 41 / 5M | 1 | 0 | 23.87 | 23.49 | 23.80 | 0 | 22.17 | 22.82 | 22.37 | 1 | 20.93 | 21.63 | 21.02 | 2 |
| Gain (dBi) | | 5.38 | 5.38 | 5.38 | 5.38 | | 5.38 | 5.38 | | | | | | |
| Max EIRP Power (dBm) | | 29.25 | 28.87 | 29.18 | 27.55 | | 28.20 | 27.75 | 26.31 | | 27.01 | 26.40 | | |

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|----------------------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 39700 | 40620 | 41540 | | 39700 | 40620 | 41540 | | 39700 | 40620 | 41540 | |
| | | | MHz | MHz | MHz | | MHz | MHz | MHz | | MHz | MHz | MHz | |
| 41 / 10M | 1 | 0 | 23.29 | 23.50 | 23.75 | 0 | 22.67 | 22.23 | 22.31 | 1 | 21.18 | 21.47 | 21.75 | 2 |
| Gain (dBi) | | 5.38 | 5.38 | 5.38 | 5.38 | | 5.38 | 5.38 | | | | | | |
| Max EIRP Power (dBm) | | 28.67 | 28.88 | 29.13 | 28.05 | | 27.61 | 27.69 | 26.56 | | 26.85 | 27.13 | | |

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|----------------------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 39725 | 40620 | 41515 | | 39725 | 40620 | 41515 | | 39725 | 40620 | 41515 | |
| | | | MHz | MHz | MHz | | MHz | MHz | MHz | | MHz | MHz | MHz | |
| 41 / 15M | 1 | 0 | 23.72 | 23.38 | 23.35 | 0 | 22.49 | 23.51 | 22.18 | 1 | 21.48 | 21.07 | 21.37 | 2 |
| Gain (dBi) | | 5.38 | 5.38 | 5.38 | 5.38 | | 5.38 | 5.38 | | | | | | |
| Max EIRP Power (dBm) | | 29.10 | 28.76 | 28.73 | 27.87 | | 28.89 | 27.56 | 26.86 | | 26.45 | 26.75 | | |

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|----------------------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 39750 | 40620 | 41490 | | 39750 | 40620 | 41490 | | 39750 | 40620 | 41490 | |
| | | | MHz | MHz | MHz | | MHz | MHz | MHz | | MHz | MHz | MHz | |
| 41 / 20M | 1 | 0 | 23.69 | 23.66 | 23.83 | 0 | 22.64 | 22.72 | 22.48 | 1 | 21.22 | 21.27 | 21.25 | 2 |
| Gain (dBi) | | 5.38 | 5.38 | 5.38 | 5.38 | | 5.38 | 5.38 | | | | | | |
| Max EIRP Power (dBm) | | 29.07 | 29.04 | 29.21 | 28.02 | | 28.10 | 27.86 | 26.60 | | 26.65 | 26.63 | | |

LTE CA_41C (PCC/SCC: 10M+5M)

| Channel Number | Freq. (MHz) | QPSK | | | | | | | |
|----------------|-------------|-----------|--------|-----------|--------|-----------------|------|-----------|----------|
| | | PCC | | SCC | | Conducted Power | Gain | EIRP(dBm) | EIRP(mW) |
| | | RB Number | RB Set | RB Number | RB Set | Chain 0 | | | |
| 40620+40692 | 2593+2600.2 | 0 | 0 | 1 | 24 | 23.58 | 5.38 | 28.96 | 787.05 |

LTE CA_41C (PCC/SCC: 20M+20M)

| Channel Number | Freq. (MHz) | QPSK | | | | | | | |
|----------------|-------------|-----------|--------|-----------|--------|-----------------|------|-----------|----------|
| | | PCC | | SCC | | Conducted Power | Gain | EIRP(dBm) | EIRP(mW) |
| | | RB Number | RB Set | RB Number | RB Set | Chain 0 | | | |
| 40620+40818 | 2593+2612.8 | 100 | 0 | 100 | 0 | 21.82 | 5.38 | 27.20 | 524.81 |

LTE Band 66

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|----------------------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 131979 | 132322 | 132665 | | 131979 | 132322 | 132665 | | 131979 | 132322 | 132665 | |
| | | | MHz | MHz | MHz | | MHz | MHz | MHz | | MHz | MHz | MHz | |
| 66 / 1.4M | 1 | 0 | 23.45 | 23.79 | 23.69 | 0 | 22.03 | 22.69 | 22.53 | 1 | 21.46 | 21.41 | 21.52 | 2 |
| Gain (dBi) | | 5.99 | 5.99 | 5.99 | 5.99 | | 5.99 | 5.99 | 5.99 | | | | | |
| Max EIRP Power (dBm) | | 29.44 | 29.78 | 29.68 | 28.02 | | 28.68 | 28.52 | 27.45 | | 27.40 | 27.51 | | |

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|----------------------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 131987 | 132322 | 132657 | | 131987 | 132322 | 132657 | | 131987 | 132322 | 132657 | |
| | | | MHz | MHz | MHz | | MHz | MHz | MHz | | MHz | MHz | MHz | |
| 66 / 3M | 1 | 0 | 23.88 | 23.44 | 23.29 | 0 | 22.07 | 22.50 | 22.59 | 1 | 21.31 | 21.19 | 21.34 | 2 |
| Gain (dBi) | | 5.99 | 5.99 | 5.99 | 5.99 | | 5.99 | 5.99 | 5.99 | | | | | |
| Max EIRP Power (dBm) | | 29.87 | 29.43 | 29.28 | 28.06 | | 28.49 | 28.58 | 27.30 | | 27.18 | 27.33 | | |

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|----------------------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 131997 | 132322 | 132647 | | 131997 | 132322 | 132647 | | 131997 | 132322 | 132647 | |
| | | | MHz | MHz | MHz | | MHz | MHz | MHz | | MHz | MHz | MHz | |
| 66 / 5M | 1 | 0 | 23.58 | 23.82 | 23.30 | 0 | 22.51 | 22.32 | 22.66 | 1 | 21.45 | 21.73 | 21.12 | 2 |
| Gain (dBi) | | 5.99 | 5.99 | 5.99 | 5.99 | | 5.99 | 5.99 | 5.99 | | | | | |
| Max EIRP Power (dBm) | | 29.57 | 29.81 | 29.29 | 28.50 | | 28.31 | 28.65 | 27.44 | | 27.72 | 27.11 | | |

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|----------------------|---------|-----------|--------|--------|---------|---------------|--------|--------|---------|---------------|--------|--------|---------|---------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 132022 | 132322 | 132622 | | 132022 | 132322 | 132622 | | 132022 | 132322 | 132622 | |
| | | | MHz | MHz | MHz | | MHz | MHz | MHz | | MHz | MHz | MHz | |
| 66 / 10M | 1 | 0 | 23.30 | 23.37 | 23.85 | 0 | 22.67 | 22.55 | 22.59 | 1 | 21.44 | 21.45 | 21.60 | 2 |
| Gain (dBi) | | 5.99 | 5.99 | 5.99 | 5.99 | | 5.99 | 5.99 | 5.99 | | | | | |
| Max EIRP Power (dBm) | | 29.29 | 29.36 | 29.84 | 28.66 | | 28.54 | 28.58 | 27.43 | | 27.44 | 27.59 | | |

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|----------------------|---------|-----------|--------|--------|---------|---------------------|--------|--------|---------|---------------------|--------|--------|---------|---------------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 132047 | 132322 | 132597 | | 132047 | 132322 | 132597 | | 132047 | 132322 | 132597 | |
| | | | 1717.5 | 1745 | 1772.5 | | 1717.5 | 1745 | 1772.5 | | 1717.5 | 1745 | 1772.5 | |
| | | | MHz | MHz | MHz | MHz | MHz | MHz | MHz | MHz | MHz | | | |
| 66 / 15M | 1 | 0 | 23.38 | 23.81 | 23.73 | 0 | 22.59 | 22.64 | 22.17 | 1 | 21.33 | 21.50 | 21.74 | 2 |
| Gain (dBi) | | | 5.99 | 5.99 | 5.99 | | 5.99 | 5.99 | 5.99 | | 5.99 | 5.99 | 5.99 | |
| Max EIRP Power (dBm) | | | 29.37 | 29.80 | 29.72 | | 28.58 | 28.63 | 28.16 | | 27.32 | 27.49 | 27.73 | |

| Band / BW | RB Size | RB Offset | QPSK | | | 3GPP MPR (dB) | 16QAM | | | 3GPP MPR (dB) | 64QAM | | | 3GPP MPR (dB) |
|----------------------|---------|-----------|--------|--------|---------|---------------------|--------|--------|---------|---------------------|--------|--------|---------|---------------------|
| | | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | | Low CH | Mid CH | High CH | |
| | | | 132072 | 132322 | 132572 | | 132072 | 132322 | 132572 | | 132072 | 132322 | 132572 | |
| | | | 1720 | 1745 | 1770 | | 1720 | 1745 | 1770 | | 1720 | 1745 | 1770 | |
| | | | MHz | MHz | MHz | MHz | MHz | MHz | MHz | MHz | | | | |
| 66 / 20M | 1 | 0 | 23.62 | 23.84 | 23.74 | | 22.44 | 22.26 | 22.56 | | 21.27 | 21.65 | 21.17 | 2 |
| Gain (dBi) | | | 5.99 | 5.99 | 5.99 | | 5.99 | 5.99 | 5.99 | | 5.99 | 5.99 | | |
| Max EIRP Power (dBm) | | | 29.61 | 29.83 | 29.73 | | 28.43 | 28.25 | 28.55 | | 27.26 | 27.64 | 27.16 | |

EIRP Power Density

LTE Band 30

QPSK / 5M

| Channel | Frequency (MHz) | Antenna Polarization | Reading (dB μ V/m)/5MHz | Correction Factor (dB) | EIRP Power Density (dBm/5MHz) | EIRP Power Density (mW /5MHz) |
|---------|-----------------|----------------------|-----------------------------|------------------------|-------------------------------|-------------------------------|
| 27685 | 2307.5 | H | 118.90 | -95.26 | 23.64 | 230.94 |
| 27710 | 2310 | H | 119.08 | -95.26 | 23.82 | 240.99 |
| 27735 | 2312.5 | H | 119.18 | -95.26 | 23.92 | 246.60 |

Note: The worst case vertical or horizontal polarization have been investigated and find the worst is horizontal.

QPSK / 10M

| Channel | Frequency (MHz) | Antenna Polarization | Reading (dB μ V/m)/5MHz | Correction Factor (dB) | EIRP Power Density (dBm/5MHz) | EIRP Power Density (mW /5MHz) |
|---------|-----------------|----------------------|-----------------------------|------------------------|-------------------------------|-------------------------------|
| 27710 | 2310 | H | 119.04 | -95.26 | 23.78 | 238.78 |

Note: The worst case vertical or horizontal polarization have been investigated and find the worst is horizontal.

16QAM / 5M

| Channel | Frequency (MHz) | Antenna Polarization | Reading (dB μ V/m)/5MHz | Correction Factor (dB) | EIRP Power Density (dBm/5MHz) | EIRP Power Density (mW /5MHz) |
|---------|-----------------|----------------------|-----------------------------|------------------------|-------------------------------|-------------------------------|
| 27685 | 2307.5 | H | 118.31 | -95.26 | 23.05 | 201.84 |
| 27710 | 2310 | H | 118.55 | -95.26 | 23.29 | 213.30 |
| 27735 | 2312.5 | H | 118.43 | -95.26 | 23.17 | 207.49 |

Note: The worst case vertical or horizontal polarization have been investigated and find the worst is horizontal.

16QAM / 10M

| Channel | Frequency (MHz) | Antenna Polarization | Reading (dB μ V/m)/5MHz | Correction Factor (dB) | EIRP Power Density (dBm/5MHz) | EIRP Power Density (mW /5MHz) |
|---------|-----------------|----------------------|-----------------------------|------------------------|-------------------------------|-------------------------------|
| 27710 | 2310 | H | 118.06 | -95.26 | 22.80 | 190.55 |

Note: The worst case vertical or horizontal polarization have been investigated and find the worst is horizontal.

64QAM / 5M

| Channel | Frequency (MHz) | Antenna Polarization | Reading (dB μ V/m)/5MHz | Correction Factor (dB) | EIRP Power Density (dBm/5MHz) | EIRP Power Density (mW /5MHz) |
|---------|-----------------|----------------------|-----------------------------|------------------------|-------------------------------|-------------------------------|
| 27685 | 2307.5 | H | 118.11 | -95.26 | 22.85 | 192.75 |
| 27710 | 2310 | H | 118.44 | -95.26 | 23.18 | 207.97 |
| 27735 | 2312.5 | H | 118.41 | -95.26 | 23.15 | 206.54 |

Note: The worst case vertical or horizontal polarization have been investigated and find the worst is horizontal.

64QAM / 10M

| Channel | Frequency (MHz) | Antenna Polarization | Reading (dB μ V/m)/5MHz | Correction Factor (dB) | EIRP Power Density (dBm/5MHz) | EIRP Power Density (mW /5MHz) |
|---------|-----------------|----------------------|-----------------------------|------------------------|-------------------------------|-------------------------------|
| 27710 | 2310 | H | 117.98 | -95.26 | 22.72 | 187.07 |

Note: The worst case vertical or horizontal polarization have been investigated and find the worst is horizontal.

4.2 Modulation characteristics Measurement

4.2.1 Limits of Modulation characteristics

N/A

4.2.2 Test Procedure

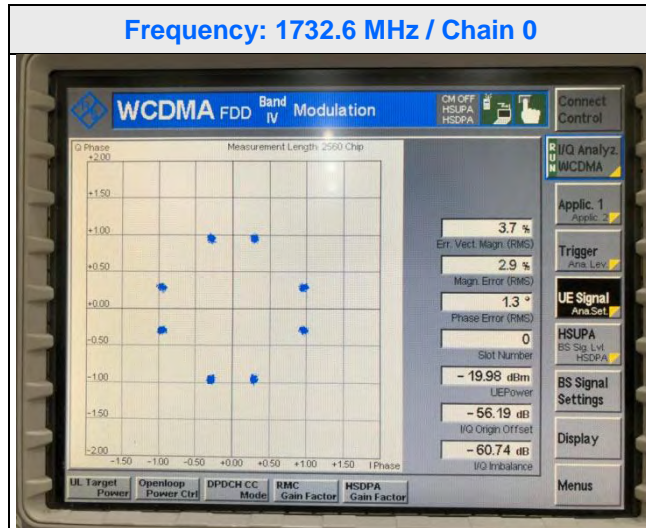
Connect the EUT to Communication Simulator via the antenna connector, The frequency band is set as EUT supported Modulation and Channels, the EUT output is matched with 50 ohm load, the waveform quality and constellation of the EUT was tested.

4.2.3 Test Setup

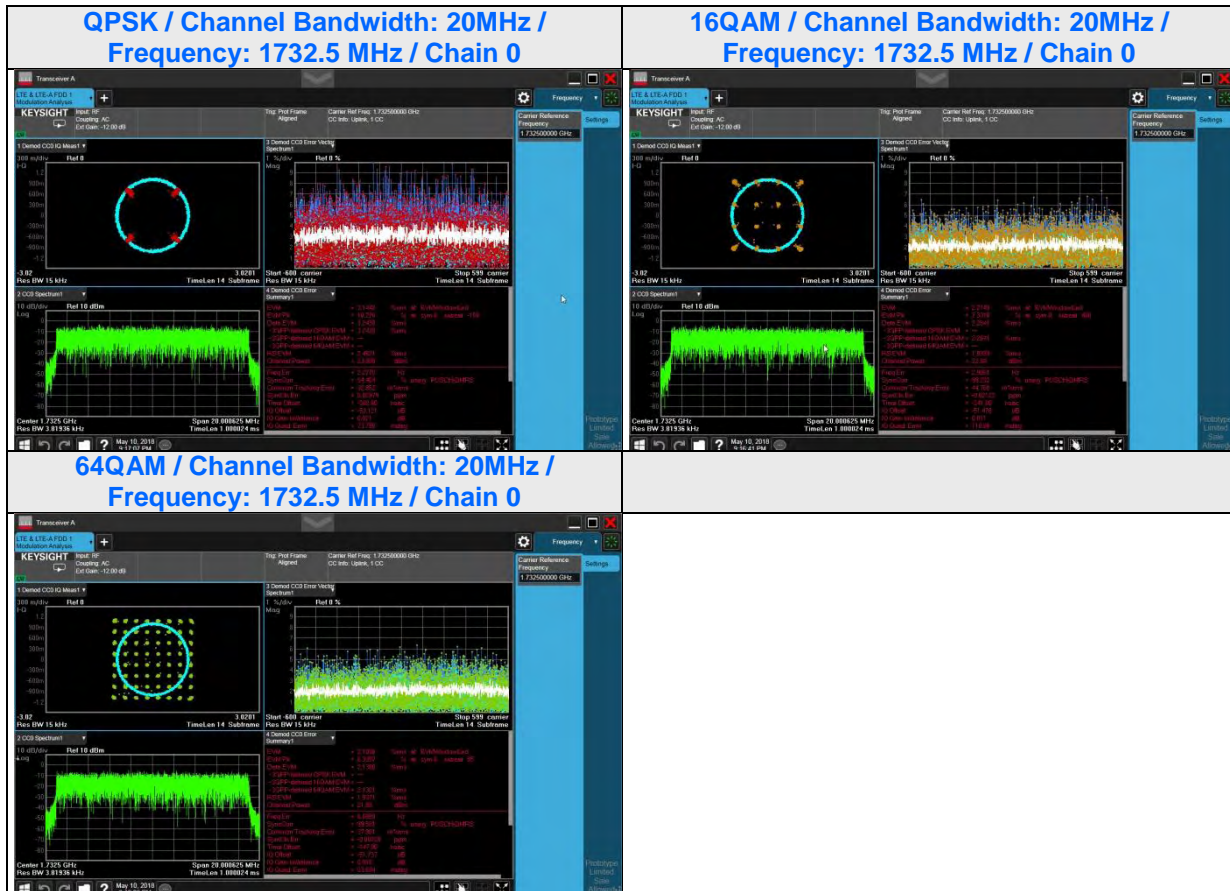


4.2.4 Test Results

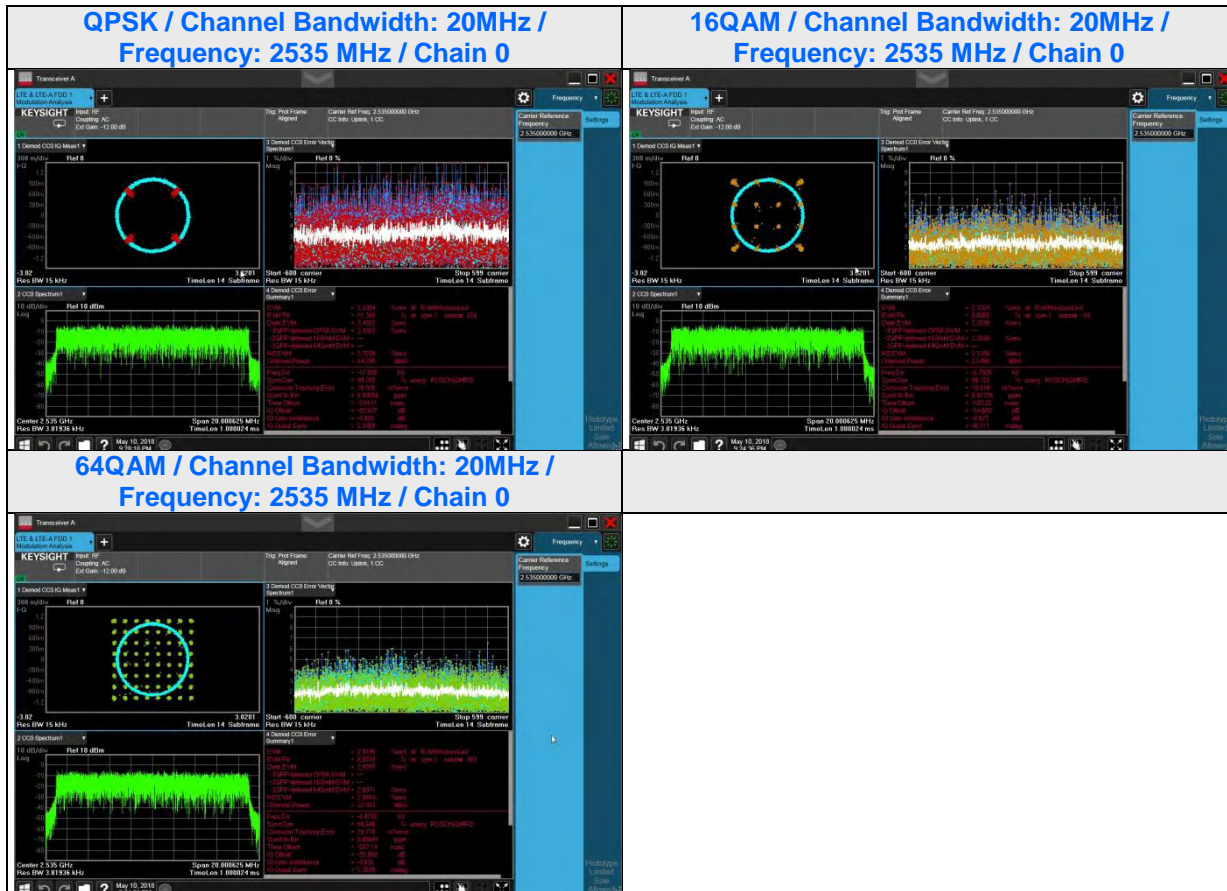
WCDMA B4



LTE Band 4



LTE Band 7



LTE Band 12

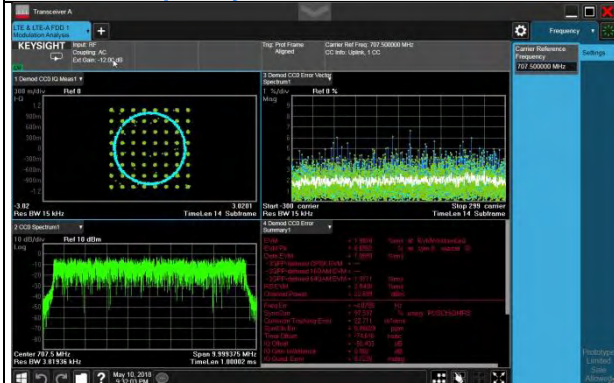
**QPSK / Channel Bandwidth: 10MHz /
Frequency: 707.5 MHz / Chain 0**



**16QAM / Channel Bandwidth: 10MHz /
Frequency: 707.5 MHz / Chain 0**



**64QAM / Channel Bandwidth: 10MHz /
Frequency: 707.5 MHz / Chain 0**



LTE Band 13

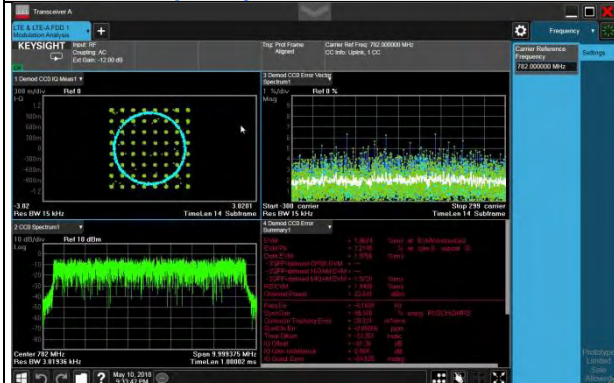
**QPSK / Channel Bandwidth: 10MHz /
Frequency: 782 MHz / Chain 0**



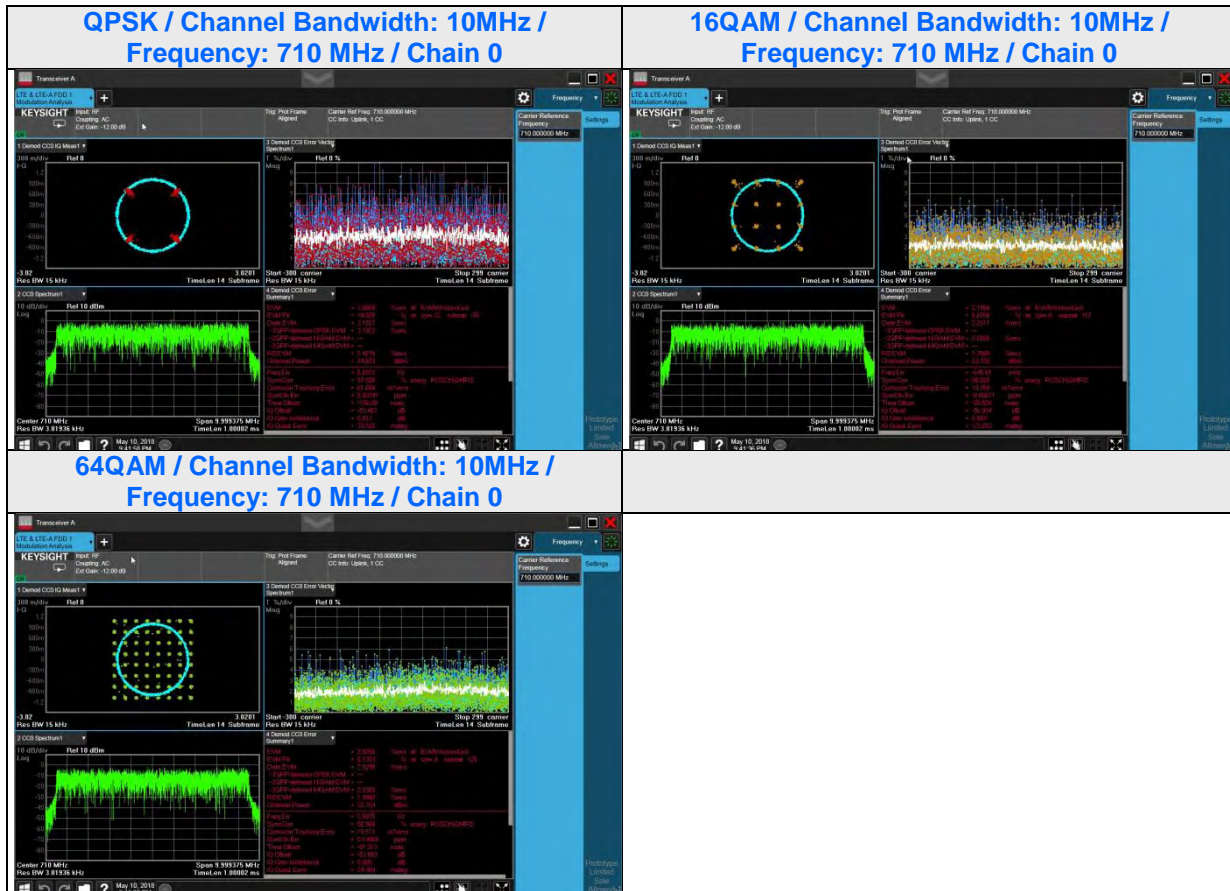
**16QAM / Channel Bandwidth: 10MHz /
Frequency: 782 MHz / Chain 0**



**64QAM / Channel Bandwidth: 10MHz /
Frequency: 782 MHz / Chain 0**

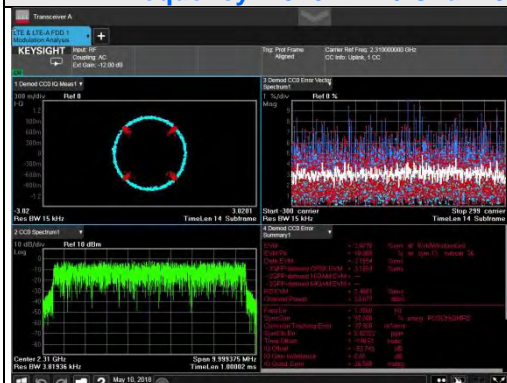


LTE Band 17

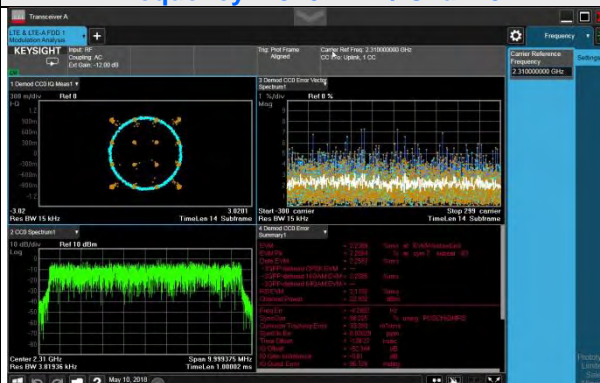


LTE Band 30

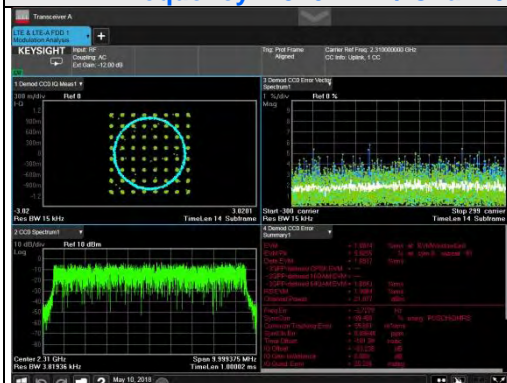
QPSK / Channel Bandwidth: 10MHz / Frequency: 2310 MHz / Chain 0



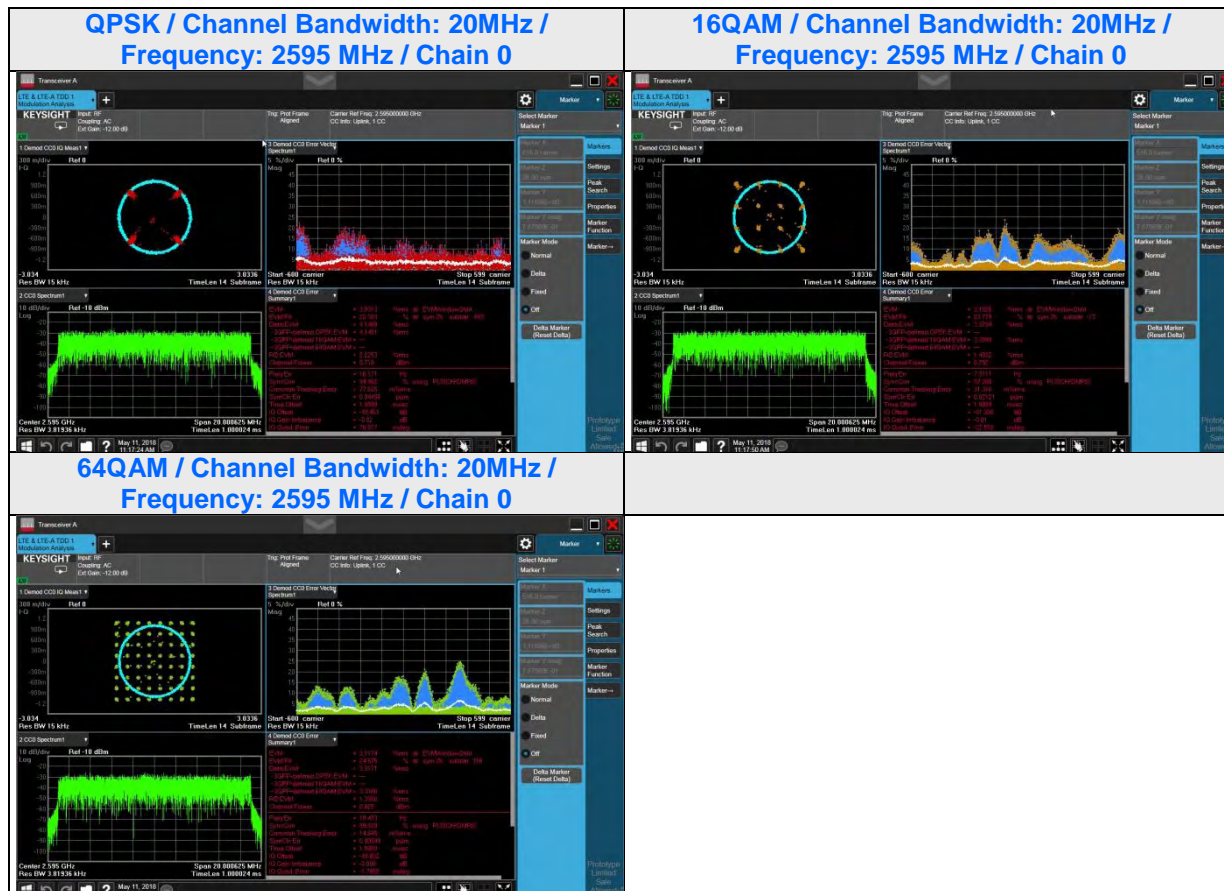
16QAM / Channel Bandwidth: 10MHz / Frequency: 2310 MHz / Chain 0



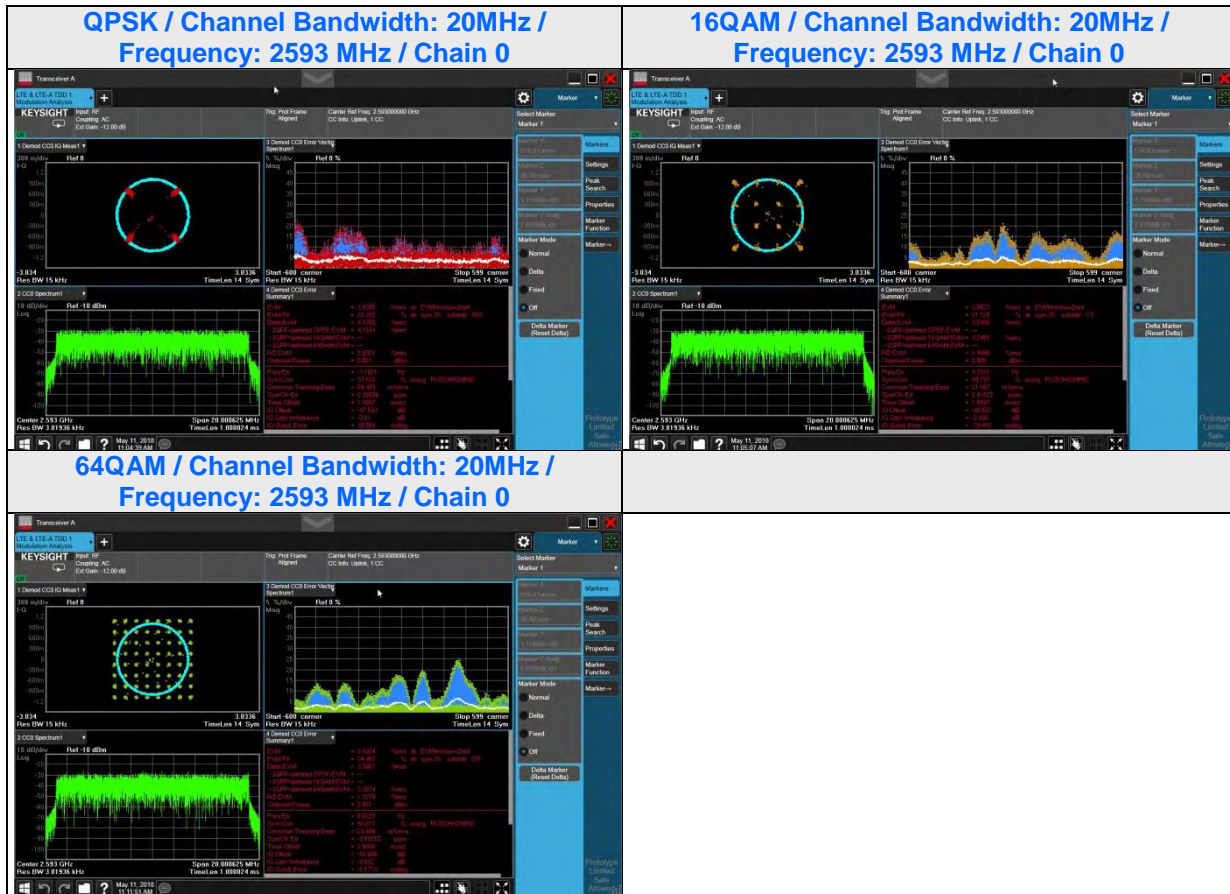
64QAM / Channel Bandwidth: 10MHz / Frequency: 2310 MHz / Chain 0



LTE Band 38

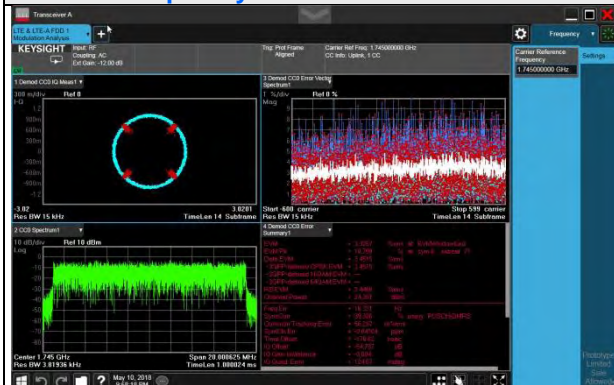


LTE Band 41

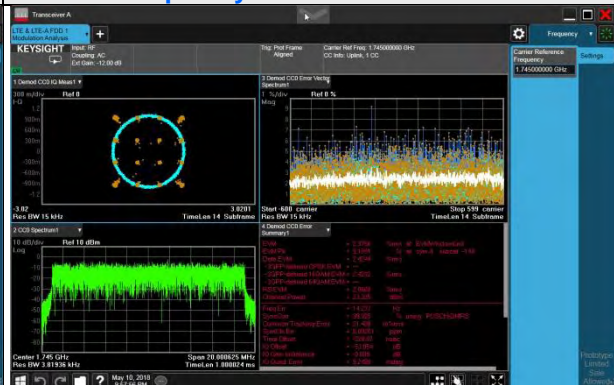


LTE Band 66

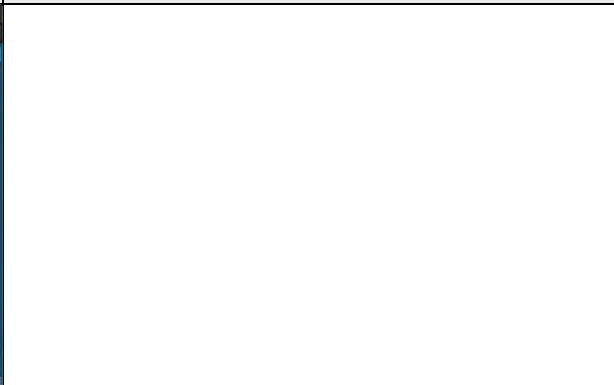
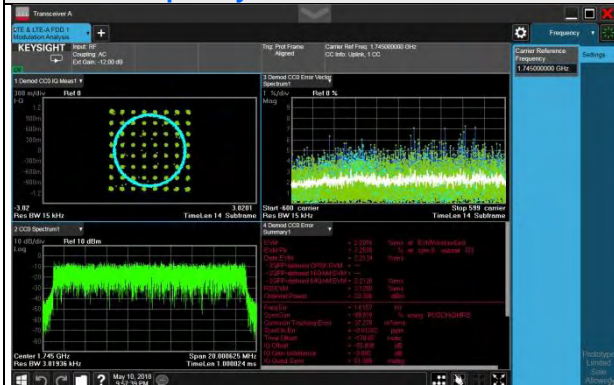
**QPSK / Channel Bandwidth: 20MHz /
Frequency: 1745 MHz / Chain 0**



**16QAM / Channel Bandwidth: 20MHz /
Frequency: 1745 MHz / Chain 0**



**64QAM / Channel Bandwidth: 20MHz /
Frequency: 1745 MHz / Chain 0**



4.3 Frequency Stability Measurement

4.3.1 Limits of Frequency Stability Measurement

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

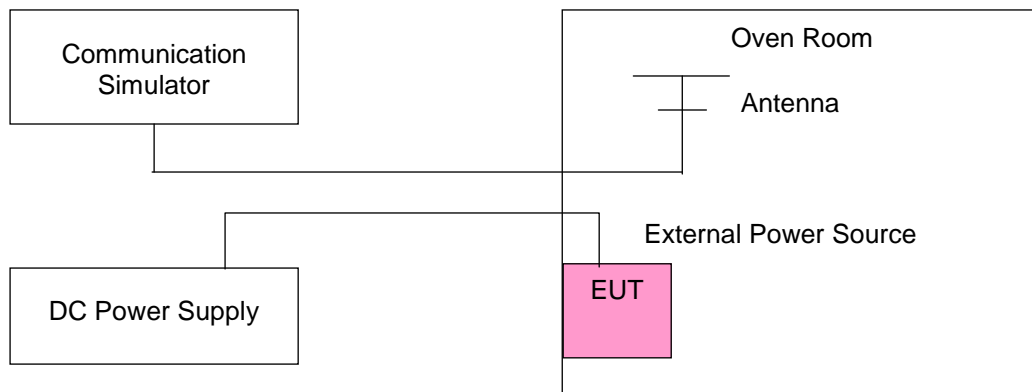
According to the FCC part 2.1055 shall be tested the frequency stability. The rule is defined that "The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block." The test extreme voltage is according to the 2.1055(d)(1) Vary primary supply voltage from 85 to 115 percent of the nominal value for other than hand carried battery equipment and the extreme temperature rule is comply with specification of EUT $-30^{\circ}\text{C} \sim 50^{\circ}\text{C}$.

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 $\pm 0.5^{\circ}\text{C}$ during the measurement testing. The each temperature step shall be at least 0.5 hours, consider the EUT could be test under the stability condition.

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

4.3.3 Test Setup



4.3.4 Test Results

WCDMA Band 4

Frequency Error vs. Voltage

| Voltage (Volts) | Frequency Error (MHz) | | Limit (MHz) | |
|-----------------|-----------------------|---------|-------------|-----------|
| | WCDMA | | Low Edge | High Edge |
| | Low | High | | |
| 2.805 | 1710.35 | 1710.44 | 1710 | 1755 |
| 3.795 | 1710.43 | 1710.31 | 1710 | 1755 |

Frequency Error vs. Temperature.

| Temp. (°C) | Frequency Error (MHz) | | Limit (MHz) | |
|------------|-----------------------|---------|-------------|-----------|
| | WCDMA | | Low Edge | High Edge |
| | low | high | | |
| 50 | 1710.38 | 1754.69 | 1710 | 1755 |
| 40 | 1710.28 | 1754.68 | 1710 | 1755 |
| 30 | 1710.34 | 1754.70 | 1710 | 1755 |
| 20 | 1710.35 | 1754.69 | 1710 | 1755 |
| 10 | 1710.35 | 1754.69 | 1710 | 1755 |
| 0 | 1710.39 | 1754.70 | 1710 | 1755 |
| -10 | 1710.34 | 1754.69 | 1710 | 1755 |
| -20 | 1710.30 | 1754.68 | 1710 | 1755 |
| -30 | 1710.34 | 1754.69 | 1710 | 1755 |

LTE Band 4

| Voltage (Volts) | Frequency Error (MHz) | | | | | | | | | | | | Limit (MHz) | |
|--------------------|-----------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------------|--------------|
| | 1.4MHz | | 3MHz | | 5MHz | | 10MHz | | 15MHz | | 20MHz | | | |
| | Low | High | Low | High | Low | High | Low | High | Low | High | Low | High | Low Edge | High Edge |
| 2.805 | 1710.18 | 1754.84 | 1710.09 | 1754.87 | 1710.22 | 1754.75 | 1710.44 | 1754.55 | 1710.81 | 1754.23 | 1710.99 | 1754.05 | 1710 | 1755 |
| 3.795 | 1710.09 | 1754.78 | 1710.19 | 1754.81 | 1710.28 | 1754.68 | 1710.51 | 1754.50 | 1710.86 | 1754.32 | 1711.11 | 1754.03 | 1710 | 1755 |

| Temp (°C) | Frequency Error (MHz) | | | | | | | | | | | | Limit (MHz) | |
|--------------|-----------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------------|------|
| | 1.4MHz | | 3MHz | | 5MHz | | 10MHz | | 15MHz | | 20MHz | | | |
| | Low | High | Low | High | Low | High | Low | High | Low | High | Low | High | Low | High |
| 50 | 1710.17 | 1754.77 | 1710.15 | 1754.90 | 1710.33 | 1754.75 | 1710.56 | 1754.54 | 1710.69 | 1754.15 | 1710.97 | 1754.01 | 1710 | 1755 |
| 40 | 1710.11 | 1754.91 | 1710.06 | 1754.81 | 1710.32 | 1754.80 | 1710.48 | 1754.54 | 1710.77 | 1754.15 | 1711.13 | 1754.06 | 1710 | 1755 |
| 30 | 1710.08 | 1754.85 | 1710.09 | 1754.82 | 1710.19 | 1754.75 | 1710.42 | 1754.49 | 1710.72 | 1754.28 | 1711.03 | 1754.01 | 1710 | 1755 |
| 20 | 1710.14 | 1754.78 | 1710.11 | 1754.88 | 1710.23 | 1754.73 | 1710.44 | 1754.43 | 1710.79 | 1754.23 | 1711.13 | 1754.02 | 1710 | 1755 |
| 10 | 1710.12 | 1754.89 | 1710.20 | 1754.75 | 1710.31 | 1754.65 | 1710.47 | 1754.57 | 1710.80 | 1754.31 | 1711.01 | 1753.96 | 1710 | 1755 |
| 0 | 1710.25 | 1754.77 | 1710.04 | 1754.90 | 1710.20 | 1754.72 | 1710.61 | 1754.40 | 1710.74 | 1754.26 | 1711.10 | 1754.06 | 1710 | 1755 |
| -10 | 1710.16 | 1754.76 | 1710.06 | 1754.84 | 1710.34 | 1754.80 | 1710.46 | 1754.45 | 1710.74 | 1754.33 | 1711.08 | 1753.99 | 1710 | 1755 |
| -20 | 1710.22 | 1754.79 | 1710.19 | 1754.92 | 1710.26 | 1754.81 | 1710.55 | 1754.55 | 1710.82 | 1754.26 | 1710.97 | 1753.96 | 1710 | 1755 |
| -30 | 1710.23 | 1754.91 | 1710.02 | 1754.82 | 1710.15 | 1754.66 | 1710.57 | 1754.46 | 1710.84 | 1754.20 | 1710.96 | 1753.98 | 1710 | 1755 |

LTE Band 7

| Voltage (Volts) | Frequency Error (MHz) | | | | | | | | Limit (MHz) | |
|-----------------|-----------------------|---------|---------|---------|---------|---------|---------|---------|-------------|-----------|
| | 5MHz | | 10MHz | | 15MHz | | 20MHz | | | |
| | Low | High | Low | High | Low | High | Low | High | Low Edge | High Edge |
| 2.805 | 2500.28 | 2569.70 | 2500.43 | 2569.40 | 2500.82 | 2569.16 | 2501.06 | 2569.03 | 2500 | 2570 |
| 3.795 | 2500.20 | 2569.70 | 2500.51 | 2569.55 | 2500.76 | 2569.21 | 2500.94 | 2568.91 | 2500 | 2570 |

| Temp. (°C) | Frequency Error (MHz) | | | | | | | | Limit (MHz) | |
|------------|-----------------------|---------|---------|---------|---------|---------|---------|---------|-------------|-----------|
| | 5MHz | | 10MHz | | 15MHz | | 20MHz | | | |
| | Low | High | Low | High | Low | High | Low | High | Low Edge | High Edge |
| 50 | 2500.29 | 2569.84 | 2500.59 | 2569.59 | 2500.86 | 2569.15 | 2501.01 | 2568.95 | 2500 | 2570 |
| 40 | 2500.29 | 2569.82 | 2500.41 | 2569.50 | 2500.79 | 2569.22 | 2501.03 | 2569.05 | 2500 | 2570 |
| 30 | 2500.26 | 2569.71 | 2500.40 | 2569.58 | 2500.84 | 2569.28 | 2501.00 | 2568.96 | 2500 | 2570 |
| 20 | 2500.19 | 2569.74 | 2500.57 | 2569.40 | 2500.71 | 2569.16 | 2500.98 | 2569.06 | 2500 | 2570 |
| 10 | 2500.16 | 2569.76 | 2500.54 | 2569.57 | 2500.72 | 2569.12 | 2501.02 | 2568.90 | 2500 | 2570 |
| 0 | 2500.25 | 2569.81 | 2500.49 | 2569.57 | 2500.85 | 2569.17 | 2500.93 | 2569.06 | 2500 | 2570 |
| -10 | 2500.21 | 2569.80 | 2500.46 | 2569.51 | 2500.85 | 2569.16 | 2500.93 | 2568.96 | 2500 | 2570 |
| -20 | 2500.20 | 2569.72 | 2500.42 | 2569.45 | 2500.74 | 2569.24 | 2501.06 | 2568.96 | 2500 | 2570 |
| -30 | 2500.30 | 2569.85 | 2500.54 | 2569.43 | 2500.74 | 2569.24 | 2500.92 | 2568.96 | 2500 | 2570 |

LTE CA_7C

| Voltage (Volts) | Frequency Error (MHz) | | Limit (MHz) | |
|-----------------|--------------------------|---------------------------|-------------|-----------|
| | CA_15+20 MHz Low Channel | CA_15+20 MHz High Channel | Low Edge | High Edge |
| 2.805 | 2500.998 | 2569.031 | 2500 | 2570 |
| 3.795 | 2500.948 | 2569.011 | 2500 | 2570 |

Frequency Error vs. Temperature.

| Temp. (°C) | Frequency Error (MHz) | | Limit (MHz) | |
|------------|--------------------------|---------------------------|-------------|-----------|
| | CA_15+20 MHz Low Channel | CA_15+20 MHz High Channel | Low Edge | High Edge |
| 50 | 2501.058 | 2569.011 | 2500 | 2570 |
| 40 | 2500.918 | 2569.091 | 2500 | 2570 |
| 30 | 2500.948 | 2568.991 | 2500 | 2570 |
| 20 | 2500.988 | 2569.031 | 2500 | 2570 |
| 10 | 2501.028 | 2569.081 | 2500 | 2570 |
| 0 | 2501.068 | 2569.111 | 2500 | 2570 |
| -10 | 2500.908 | 2569.061 | 2500 | 2570 |
| -20 | 2500.958 | 2569.081 | 2500 | 2570 |
| -30 | 2501.058 | 2569.071 | 2500 | 2570 |

LTE Band 12

| Voltage (Volts) | Frequency Error (MHz) | | | | | | | | Limit (MHz) | |
|-----------------|-----------------------|--------|--------|--------|--------|--------|--------|--------|-------------|-----------|
| | 1.4MHz | | 3MHz | | 5MHz | | 10MHz | | | |
| | Low | High | Low | High | Low | High | Low | High | Low Edge | High Edge |
| 2.805 | 699.10 | 715.89 | 699.07 | 715.76 | 699.29 | 715.82 | 699.41 | 715.54 | 699 | 716 |
| 3.795 | 699.16 | 715.83 | 699.17 | 715.85 | 699.15 | 715.83 | 699.57 | 715.43 | 699 | 716 |

| Temp. (°C) | Frequency Error (MHz) | | | | | | | | Limit (MHz) | |
|------------|-----------------------|--------|--------|--------|--------|--------|--------|--------|-------------|-----------|
| | 1.4MHz | | 3MHz | | 5MHz | | 10MHz | | | |
| | Low | High | Low | High | Low | High | Low | High | Low Edge | High Edge |
| 50 | 699.11 | 715.85 | 699.10 | 715.82 | 699.26 | 715.67 | 699.49 | 715.58 | 699 | 716 |
| 40 | 699.09 | 715.93 | 699.08 | 715.88 | 699.24 | 715.75 | 699.59 | 715.41 | 699 | 716 |
| 30 | 699.07 | 715.85 | 699.15 | 715.88 | 699.33 | 715.76 | 699.55 | 715.48 | 699 | 716 |
| 20 | 699.10 | 715.88 | 699.08 | 715.91 | 699.32 | 715.66 | 699.54 | 715.45 | 699 | 716 |
| 10 | 699.13 | 715.85 | 699.16 | 715.82 | 699.21 | 715.68 | 699.40 | 715.50 | 699 | 716 |
| 0 | 699.07 | 715.86 | 699.05 | 715.77 | 699.28 | 715.69 | 699.44 | 715.55 | 699 | 716 |
| -10 | 699.14 | 715.92 | 699.18 | 715.84 | 699.32 | 715.84 | 699.40 | 715.51 | 699 | 716 |
| -20 | 699.06 | 715.90 | 699.17 | 715.79 | 699.19 | 715.72 | 699.57 | 715.51 | 699 | 716 |
| -30 | 699.11 | 715.80 | 699.09 | 715.86 | 699.23 | 715.83 | 699.47 | 715.59 | 699 | 716 |

LTE Band 13

| Voltage (Volts) | Frequency Error (MHz) | | | | Limit (MHz) | |
|--------------------|-----------------------|--------|--------|--------|-------------|--------------|
| | 5MHz | | 10MHz | | | |
| | Low | High | Low | High | Low Edge | High Edge |
| 2.805 | 777.20 | 786.83 | 777.54 | 786.42 | 777 | 787 |
| 3.795 | 777.17 | 786.75 | 777.64 | 786.41 | 777 | 787 |

| Temp. (°C) | Frequency Error (MHz) | | | | Limit (MHz) | |
|------------|-----------------------|--------|--------|--------|-------------|--------------|
| | 5MHz | | 10MHz | | | |
| | Low | High | Low | High | Low Edge | High Edge |
| 50 | 777.20 | 786.72 | 777.45 | 786.49 | 777 | 787 |
| 40 | 777.28 | 786.71 | 777.58 | 786.43 | 777 | 787 |
| 30 | 777.20 | 786.80 | 777.55 | 786.38 | 777 | 787 |
| 20 | 777.15 | 786.67 | 777.61 | 786.41 | 777 | 787 |
| 10 | 777.34 | 786.83 | 777.59 | 786.44 | 777 | 787 |
| 0 | 777.27 | 786.75 | 777.52 | 786.42 | 777 | 787 |
| -10 | 777.16 | 786.81 | 777.59 | 786.45 | 777 | 787 |
| -20 | 777.34 | 786.68 | 777.64 | 786.48 | 777 | 787 |
| -30 | 777.18 | 786.80 | 777.55 | 786.49 | 777 | 787 |

LTE Band 17

| Voltage (Volts) | Frequency Error (MHz) | | | | Limit (MHz) | |
|--------------------|-----------------------|--------|--------|--------|-------------|--------------|
| | 5MHz | | 10MHz | | | |
| | Low | High | Low | High | Low Edge | High Edge |
| 2.805 | 704.20 | 715.64 | 704.53 | 715.55 | 704 | 716 |
| 3.795 | 704.24 | 715.80 | 704.52 | 715.39 | 704 | 716 |

| Temp. (°C) | Frequency Error (MHz) | | | | Limit (MHz) | |
|------------|-----------------------|--------|--------|--------|-------------|--------------|
| | 5MHz | | 10MHz | | | |
| | Low | High | Low | High | Low Edge | High Edge |
| 50 | 704.17 | 715.65 | 704.51 | 715.58 | 704 | 716 |
| 40 | 704.24 | 715.65 | 704.57 | 715.55 | 704 | 716 |
| 30 | 704.24 | 715.81 | 704.52 | 715.47 | 704 | 716 |
| 20 | 704.19 | 715.71 | 704.54 | 715.48 | 704 | 716 |
| 10 | 704.19 | 715.67 | 704.58 | 715.42 | 704 | 716 |
| 0 | 704.26 | 715.79 | 704.42 | 715.42 | 704 | 716 |
| -10 | 704.25 | 715.73 | 704.49 | 715.50 | 704 | 716 |
| -20 | 704.20 | 715.73 | 704.42 | 715.44 | 704 | 716 |
| -30 | 704.18 | 715.75 | 704.54 | 715.54 | 704 | 716 |

LTE Band 30

| Voltage (Volts) | Frequency Error (MHz) | | | | Limit (MHz) | |
|--------------------|-----------------------|---------|---------|---------|-------------|--------------|
| | 5MHz | | 10MHz | | | |
| | Low | High | Low | High | Low Edge | High Edge |
| 2.805 | 2305.23 | 2314.69 | 2305.56 | 2314.42 | 2305 | 2315 |
| 3.795 | 2305.18 | 2314.80 | 2305.44 | 2314.44 | 2305 | 2315 |

| Temp. (°C) | Frequency Error (MHz) | | | | Limit (MHz) | |
|------------|-----------------------|---------|---------|---------|-------------|--------------|
| | 5MHz | | 10MHz | | | |
| | Low | High | Low | High | Low Edge | High Edge |
| 50 | 2305.34 | 2314.82 | 2305.42 | 2314.57 | 2305 | 2315 |
| 40 | 2305.35 | 2314.80 | 2305.54 | 2314.53 | 2305 | 2315 |
| 30 | 2305.18 | 2314.67 | 2305.57 | 2314.49 | 2305 | 2315 |
| 20 | 2305.26 | 2314.74 | 2305.52 | 2314.48 | 2305 | 2315 |
| 10 | 2305.17 | 2314.67 | 2305.52 | 2314.46 | 2305 | 2315 |
| 0 | 2305.17 | 2314.72 | 2305.57 | 2314.39 | 2305 | 2315 |
| -10 | 2305.21 | 2314.73 | 2305.57 | 2314.56 | 2305 | 2315 |
| -20 | 2305.28 | 2314.66 | 2305.43 | 2314.47 | 2305 | 2315 |
| -30 | 2305.29 | 2314.68 | 2305.56 | 2314.38 | 2305 | 2315 |

LTE Band 38

| Voltage (Volts) | Frequency Error (MHz) | | | | | | | | Limit (MHz) | |
|-----------------|-----------------------|---------|---------|---------|---------|---------|---------|---------|-------------|-----------|
| | 5MHz | | 10MHz | | 15MHz | | 20MHz | | | |
| | Low | High | Low | High | Low | High | Low | High | Low Edge | High Edge |
| 2.805 | 2570.15 | 2619.75 | 2570.53 | 2619.49 | 2570.83 | 2619.21 | 2570.97 | 2618.87 | 2570 | 2620 |
| 3.795 | 2570.34 | 2619.65 | 2570.59 | 2619.49 | 2570.71 | 2619.29 | 2571.08 | 2618.99 | 2570 | 2620 |

| Temp. (°C) | Frequency Error (MHz) | | | | | | | | Limit (MHz) | |
|------------|-----------------------|---------|---------|---------|---------|---------|---------|---------|-------------|-----------|
| | 5MHz | | 10MHz | | 15MHz | | 20MHz | | | |
| | Low | High | Low | High | Low | High | Low | High | Low Edge | High Edge |
| 50 | 2570.23 | 2619.80 | 2570.57 | 2619.43 | 2570.73 | 2619.26 | 2571.09 | 2618.88 | 2570 | 2620 |
| 40 | 2570.18 | 2619.71 | 2570.43 | 2619.42 | 2570.73 | 2619.20 | 2571.00 | 2619.04 | 2570 | 2620 |
| 30 | 2570.33 | 2619.65 | 2570.54 | 2619.48 | 2570.69 | 2619.21 | 2571.01 | 2618.93 | 2570 | 2620 |
| 20 | 2570.22 | 2619.83 | 2570.61 | 2619.44 | 2570.76 | 2619.22 | 2570.97 | 2619.01 | 2570 | 2620 |
| 10 | 2570.16 | 2619.73 | 2570.54 | 2619.41 | 2570.71 | 2619.27 | 2570.98 | 2618.91 | 2570 | 2620 |
| 0 | 2570.23 | 2619.68 | 2570.51 | 2619.49 | 2570.77 | 2619.16 | 2570.98 | 2618.98 | 2570 | 2620 |
| -10 | 2570.26 | 2619.74 | 2570.57 | 2619.40 | 2570.82 | 2619.17 | 2571.14 | 2618.89 | 2570 | 2620 |
| -20 | 2570.23 | 2619.69 | 2570.53 | 2619.45 | 2570.87 | 2619.16 | 2571.01 | 2619.04 | 2570 | 2620 |
| -30 | 2570.29 | 2619.72 | 2570.43 | 2619.49 | 2570.83 | 2619.23 | 2571.10 | 2618.92 | 2570 | 2620 |

LTE CA_38C

| Voltage (Volts) | Frequency Error (MHz) | | Limit (MHz) | |
|-----------------|--------------------------|---------------------------|-------------|-----------|
| | CA_15+15 MHz Low Channel | CA_15+15 MHz High Channel | Low Edge | High Edge |
| 2.805 | 2570.778 | 2619.252 | 2570 | 2620 |
| 3.795 | 2570.888 | 2619.172 | 2570 | 2620 |

Frequency Error vs. Temperature.

| Temp. (°C) | Frequency Error (MHz) | | Limit (MHz) | |
|------------|--------------------------|---------------------------|-------------|-----------|
| | CA_15+15 MHz Low Channel | CA_15+15 MHz High Channel | Low Edge | High Edge |
| 50 | 2570.908 | 2619.212 | 2570 | 2620 |
| 40 | 2570.768 | 2619.092 | 2570 | 2620 |
| 30 | 2570.768 | 2619.272 | 2570 | 2620 |
| 20 | 2570.728 | 2619.142 | 2570 | 2620 |
| 10 | 2570.828 | 2619.152 | 2570 | 2620 |
| 0 | 2570.878 | 2619.222 | 2570 | 2620 |
| -10 | 2570.878 | 2619.102 | 2570 | 2620 |
| -20 | 2570.778 | 2619.162 | 2570 | 2620 |
| -30 | 2570.788 | 2619.092 | 2570 | 2620 |

LTE Band 41

| Voltage (Volts) | Frequency Error (MHz) | | | | Limit (MHz) | |
|-----------------|-----------------------|---------|---------|---------|-------------|-----------|
| | 5MHz | 10MHz | 15MHz | 20MHz | Low Edge | High Edge |
| 2.805 | 2593.02 | 2593.03 | 2592.94 | 2592.92 | 2496 | 2690 |
| 3.795 | 2593.08 | 2593.07 | 2593.04 | 2592.92 | 2496 | 2690 |

| Temp. (°C) | Frequency Error (MHz) | | | | Limit (MHz) | |
|------------|-----------------------|---------|---------|---------|-------------|-----------|
| | 5MHz | 10MHz | 15MHz | 20MHz | Low Edge | High Edge |
| 50 | 2592.90 | 2592.91 | 2593.01 | 2593.00 | 2496 | 2690 |
| 40 | 2592.94 | 2592.91 | 2593.04 | 2592.90 | 2496 | 2690 |
| 30 | 2592.92 | 2593.04 | 2593.03 | 2593.03 | 2496 | 2690 |
| 20 | 2593.03 | 2593.06 | 2592.92 | 2593.08 | 2496 | 2690 |
| 10 | 2593.09 | 2592.99 | 2593.03 | 2593.04 | 2496 | 2690 |
| 0 | 2593.02 | 2593.01 | 2592.95 | 2592.92 | 2496 | 2690 |
| -10 | 2593.06 | 2593.03 | 2592.96 | 2593.02 | 2496 | 2690 |
| -20 | 2593.09 | 2593.07 | 2593.08 | 2593.07 | 2496 | 2690 |
| -30 | 2592.90 | 2592.96 | 2593.06 | 2593.03 | 2496 | 2690 |

LTE CA_41C

| Voltage (Volts) | Frequency Error (MHz) | | Limit (MHz) | |
|-----------------|-------------------------|--------------------------|-------------|-----------|
| | CA_10+5 MHz Low Channel | CA_10+5 MHz High Channel | Low Edge | High Edge |
| 2.805 | 2507.320 | 2689.510 | 2500 | 2690 |
| 3.795 | 2507.280 | 2689.660 | 2500 | 2690 |

Frequency Error vs. Temperature

| Temp. (°C) | Frequency Error (MHz) | | Limit (MHz) | |
|------------|-------------------------|--------------------------|-------------|-----------|
| | CA_10+5 MHz Low Channel | CA_10+5 MHz High Channel | Low Edge | High Edge |
| 50 | 2507.310 | 2689.580 | 2500 | 2690 |
| 40 | 2507.380 | 2689.560 | 2500 | 2690 |
| 30 | 2507.250 | 2689.510 | 2500 | 2690 |
| 20 | 2507.370 | 2689.560 | 2500 | 2690 |
| 10 | 2507.310 | 2689.670 | 2500 | 2690 |
| 0 | 2507.280 | 2689.600 | 2500 | 2690 |
| -10 | 2507.270 | 2689.660 | 2500 | 2690 |
| -20 | 2507.410 | 2689.530 | 2500 | 2690 |
| -30 | 2507.400 | 2689.570 | 2500 | 2690 |

LTE Band 66

| Voltage (Volts) | Frequency Error (MHz) | | | | | | | | | | | | Limit (MHz) | |
|-----------------|-----------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------------|-----------|
| | 1.4MHz | | 3MHz | | 5MHz | | 10MHz | | 15MHz | | 20MHz | | | |
| | Low | High | Low | High | Low | High | Low | High | Low | High | Low | High | Low Edge | High Edge |
| 2.805 | 1710.69 | 1779.31 | 1711.45 | 1778.51 | 1712.43 | 1777.49 | 1715.07 | 1774.93 | 1717.43 | 1772.59 | 1720.05 | 1769.97 | 1710 | 1780 |
| 3.795 | 1710.67 | 1779.26 | 1711.59 | 1778.40 | 1712.52 | 1777.43 | 1715.06 | 1775.03 | 1717.47 | 1772.42 | 1719.98 | 1769.93 | 1710 | 1780 |

| Temp. (°C) | Frequency Error (MHz) | | | | | | | | | | | | Limit (MHz) | |
|------------|-----------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------------|-----------|
| | 1.4MHz | | 3MHz | | 5MHz | | 10MHz | | 15MHz | | 20MHz | | | |
| | Low | High | Low | High | Low | High | Low | High | Low | High | Low | High | Low Edge | High Edge |
| 50 | 1710.72 | 1779.24 | 1711.54 | 1778.53 | 1712.55 | 1777.57 | 1714.92 | 1774.99 | 1717.51 | 1772.41 | 1719.97 | 1769.93 | 1710 | 1780 |
| 40 | 1710.72 | 1779.24 | 1711.55 | 1778.44 | 1712.48 | 1777.52 | 1714.96 | 1774.92 | 1717.44 | 1772.49 | 1719.99 | 1770.05 | 1710 | 1780 |
| 30 | 1710.69 | 1779.39 | 1711.45 | 1778.51 | 1712.55 | 1777.56 | 1714.97 | 1775.03 | 1717.42 | 1772.44 | 1720.00 | 1770.03 | 1710 | 1780 |
| 20 | 1710.70 | 1779.30 | 1711.50 | 1778.50 | 1712.50 | 1777.50 | 1715.00 | 1775.00 | 1717.50 | 1772.50 | 1720.00 | 1770.00 | 1710 | 1780 |
| 10 | 1710.64 | 1779.32 | 1711.55 | 1778.54 | 1712.56 | 1777.54 | 1715.02 | 1774.97 | 1717.57 | 1772.41 | 1720.08 | 1770.02 | 1710 | 1780 |
| 0 | 1710.68 | 1779.38 | 1711.41 | 1778.59 | 1712.42 | 1777.46 | 1715.08 | 1775.09 | 1717.48 | 1772.43 | 1719.95 | 1770.06 | 1710 | 1780 |
| -10 | 1710.62 | 1779.24 | 1711.57 | 1778.46 | 1712.43 | 1777.46 | 1715.04 | 1775.05 | 1717.41 | 1772.40 | 1719.96 | 1770.03 | 1710 | 1780 |
| -20 | 1710.76 | 1779.23 | 1711.46 | 1778.51 | 1712.42 | 1777.43 | 1714.92 | 1774.97 | 1717.52 | 1772.59 | 1720.01 | 1769.96 | 1710 | 1780 |
| -30 | 1710.65 | 1779.35 | 1711.41 | 1778.54 | 1712.54 | 1777.40 | 1715.09 | 1775.07 | 1717.43 | 1772.41 | 1720.09 | 1770.00 | 1710 | 1780 |

4.4 Emission Bandwidth Measurement

4.4.1 Limits of Emission Bandwidth Measurement

-26dB Bandwidth

According to FCC 27.53 specified that 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 26dB below the transmitter power.

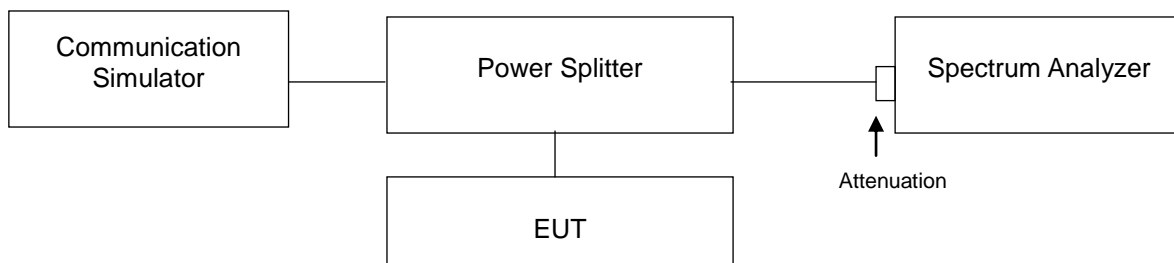
Occupied Bandwidth

The EUT makes a call to the communication simulator. All measurements were done at low, middle and high operational frequency range. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency. Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth.

4.4.2 Test Procedure

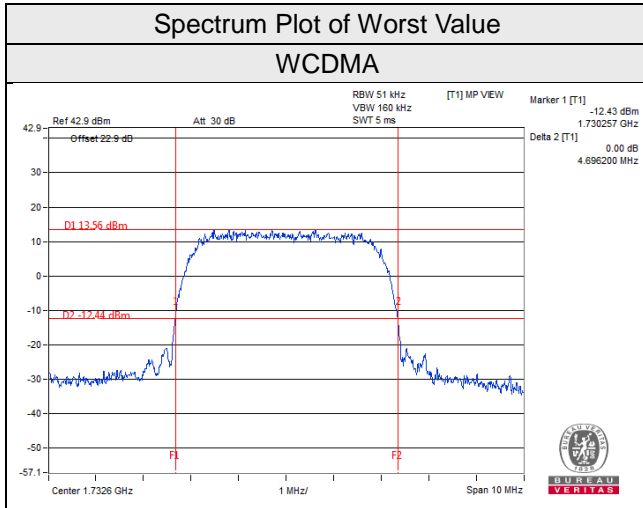
The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with $RBW \geq 1\% \times OBW$ and $VBW \geq 3 \times VBW$.

4.4.3 Test Setup



4.4.4 Test Results (-26dB Bandwidth)

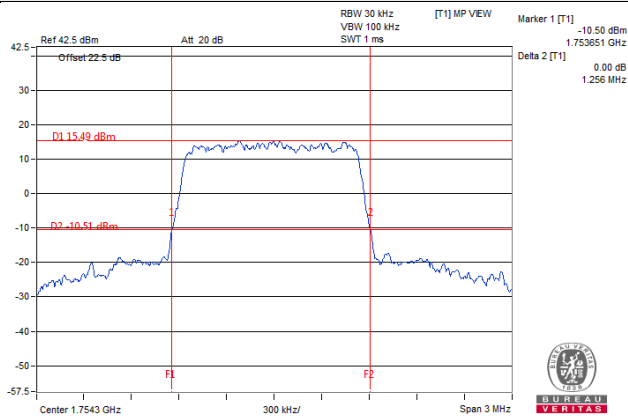
| Channel | FREQ. (MHz) | -26dB Bandwidth (MHz) |
|---------|-------------|-----------------------|
| | | WCDMA |
| 1312 | 1712.4 | 4.67 |
| 1413 | 1732.6 | 4.69 |
| 1513 | 1752.6 | 4.66 |



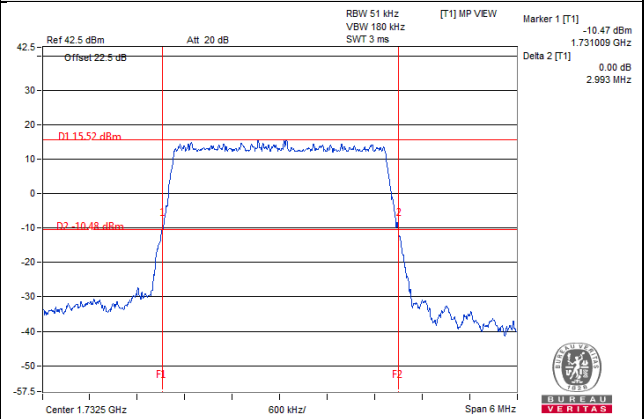
| LTE Band 4 | | | | | | | | | |
|--------------------------|-----------------|-----------------------|-------|-------|-------------------------|-----------------|-----------------------|-------|-------|
| Channel Bandwidth 1.4MHz | | | | | Channel Bandwidth 3MHz | | | | |
| Channel | Frequency (MHz) | -26dB Bandwidth (MHz) | | | Channel | Frequency (MHz) | -26dB Bandwidth (MHz) | | |
| | | QPSK | 16QAM | 64QAM | | | QPSK | 16QAM | 64QAM |
| 19957 | 1710.7 | 1.23 | 1.23 | 1.24 | 19965 | 1711.5 | 2.94 | 2.96 | 2.94 |
| 20175 | 1732.5 | 1.24 | 1.24 | 1.24 | 20175 | 1732.5 | 2.99 | 2.97 | 2.97 |
| 20393 | 1754.3 | 1.23 | 1.25 | 1.24 | 20385 | 1753.5 | 2.99 | 2.97 | 2.98 |
| Channel Bandwidth 5MHz | | | | | Channel Bandwidth 10MHz | | | | |
| Channel | Frequency (MHz) | -26dB Bandwidth (MHz) | | | Channel | Frequency (MHz) | -26dB Bandwidth (MHz) | | |
| | | QPSK | 16QAM | 64QAM | | | QPSK | 16QAM | 64QAM |
| 19975 | 1712.5 | 4.94 | 4.95 | 4.97 | 20000 | 1715 | 9.79 | 9.87 | 9.82 |
| 20175 | 1732.5 | 4.96 | 4.94 | 4.94 | 20175 | 1732.5 | 9.84 | 9.86 | 9.76 |
| 20375 | 1752.5 | 4.94 | 4.97 | 4.96 | 20350 | 1750 | 9.84 | 9.82 | 9.82 |
| Channel Bandwidth 15MHz | | | | | Channel Bandwidth 20MHz | | | | |
| Channel | Frequency (MHz) | -26dB Bandwidth (MHz) | | | Channel | Frequency (MHz) | -26dB Bandwidth (MHz) | | |
| | | QPSK | 16QAM | 64QAM | | | QPSK | 16QAM | 64QAM |
| 20025 | 1717.5 | 14.74 | 14.65 | 14.64 | 20050 | 1720 | 19.45 | 19.42 | 19.48 |
| 20175 | 1732.5 | 14.80 | 14.66 | 14.68 | 20175 | 1732.5 | 19.54 | 19.52 | 19.55 |
| 20325 | 1747.5 | 14.75 | 14.63 | 14.71 | 20300 | 1745 | 19.51 | 19.54 | 19.50 |

Spectrum Plot of Worst Value

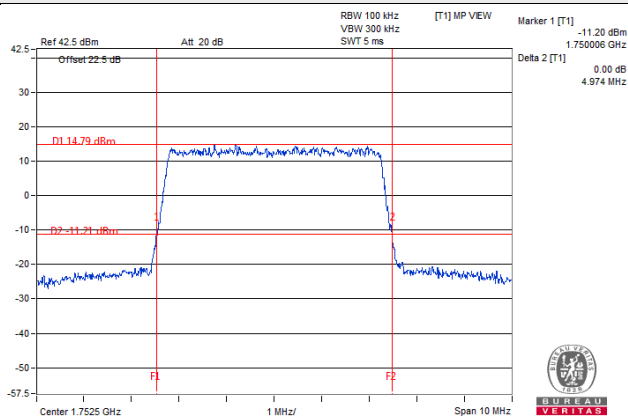
1.4MHz / 16QAM



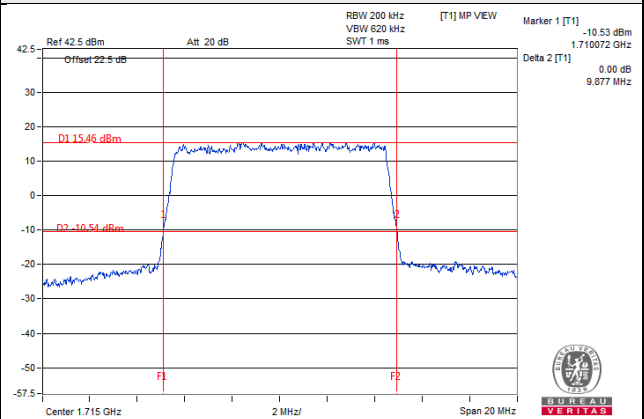
3MHz / QPSK



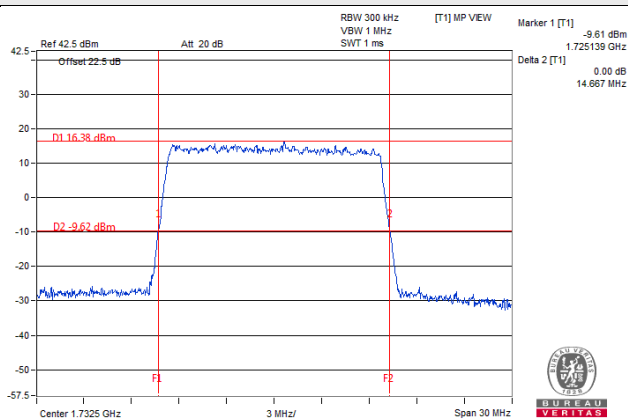
5MHz / 16QAM



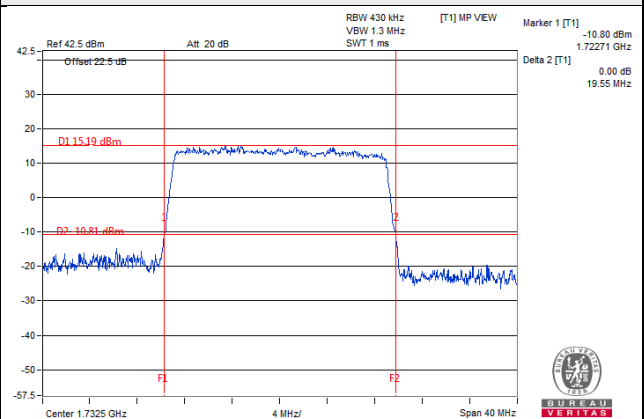
10MHz / 16QAM



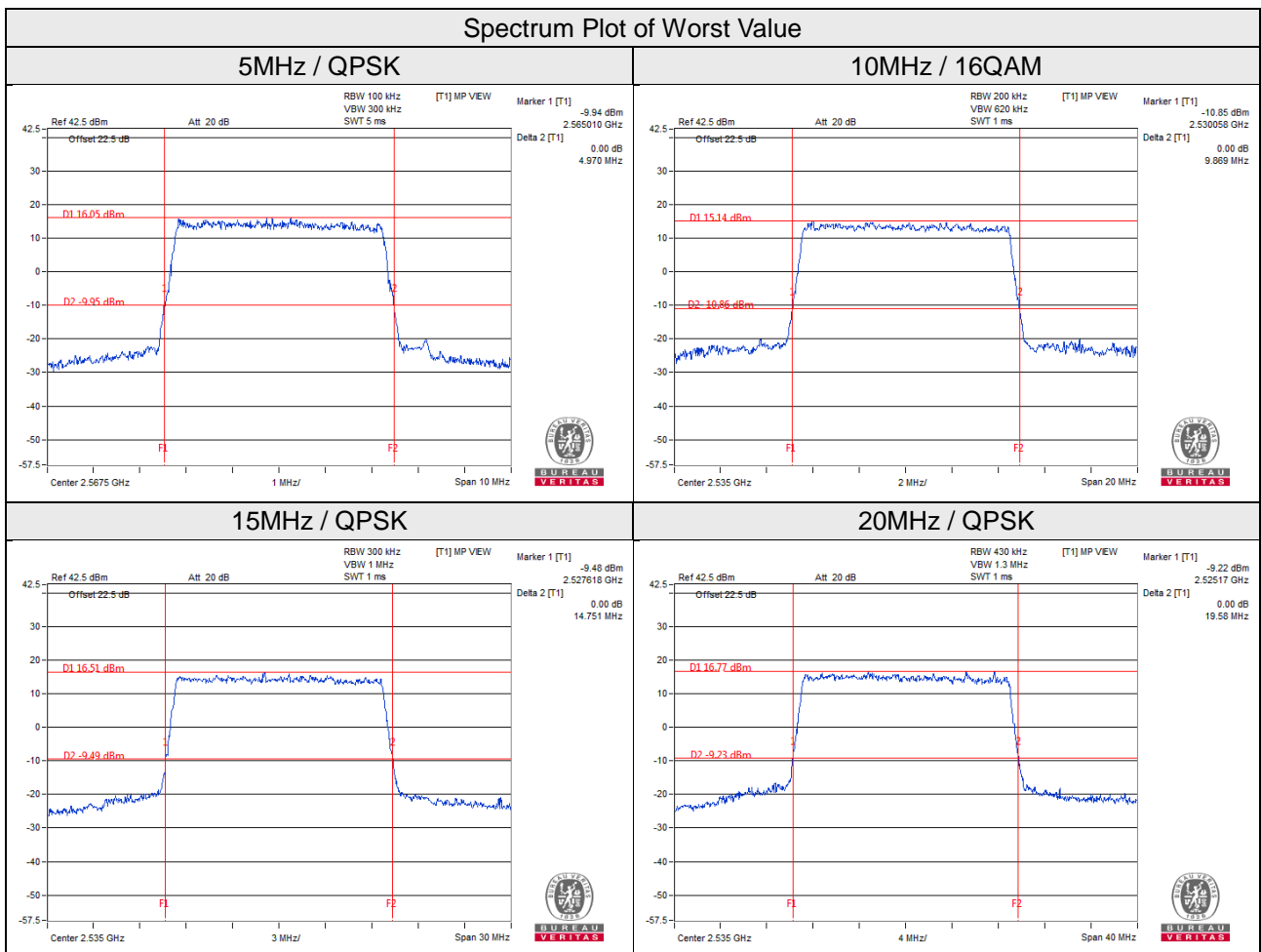
15MHz / QPSK



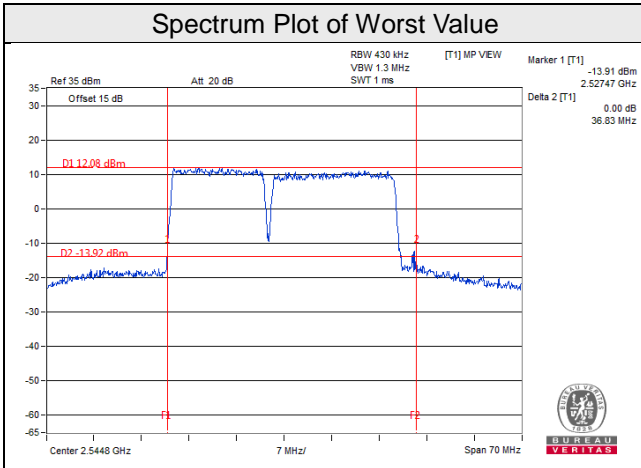
20MHz / 64QAM



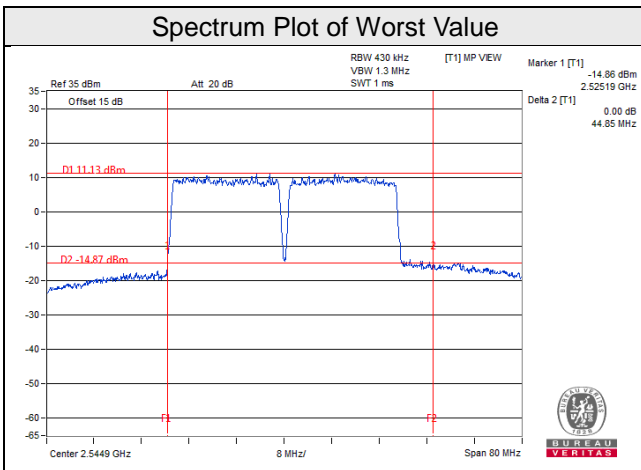
| LTE Band 7 | | | | | | | | | |
|-------------------------|-----------------|-----------------------|-------|-------|-------------------------|-----------------|-----------------------|-------|-------|
| Channel Bandwidth 5MHz | | | | | Channel Bandwidth 10MHz | | | | |
| Channel | Frequency (MHz) | -26dB Bandwidth (MHz) | | | Channel | Frequency (MHz) | -26dB Bandwidth (MHz) | | |
| | | QPSK | 16QAM | 64QAM | | | QPSK | 16QAM | 64QAM |
| 20775 | 2502.5 | 4.96 | 4.93 | 4.92 | 20800 | 2505 | 9.80 | 9.83 | 9.80 |
| 21100 | 2535 | 4.96 | 4.93 | 4.96 | 21100 | 2535 | 9.84 | 9.86 | 9.77 |
| 21425 | 2567.5 | 4.97 | 4.94 | 4.95 | 21400 | 2565 | 9.82 | 9.82 | 9.81 |
| Channel Bandwidth 15MHz | | | | | Channel Bandwidth 20MHz | | | | |
| Channel | Frequency (MHz) | -26dB Bandwidth (MHz) | | | Channel | Frequency (MHz) | -26dB Bandwidth (MHz) | | |
| | | QPSK | 16QAM | 64QAM | | | QPSK | 16QAM | 64QAM |
| 20825 | 2507.5 | 14.71 | 14.64 | 14.71 | 20850 | 2510 | 19.49 | 19.44 | 19.48 |
| 21100 | 2535 | 14.75 | 14.70 | 14.66 | 21100 | 2535 | 19.58 | 19.49 | 19.45 |
| 21375 | 2562.5 | 14.66 | 14.61 | 14.60 | 21350 | 2560 | 19.56 | 19.37 | 19.46 |



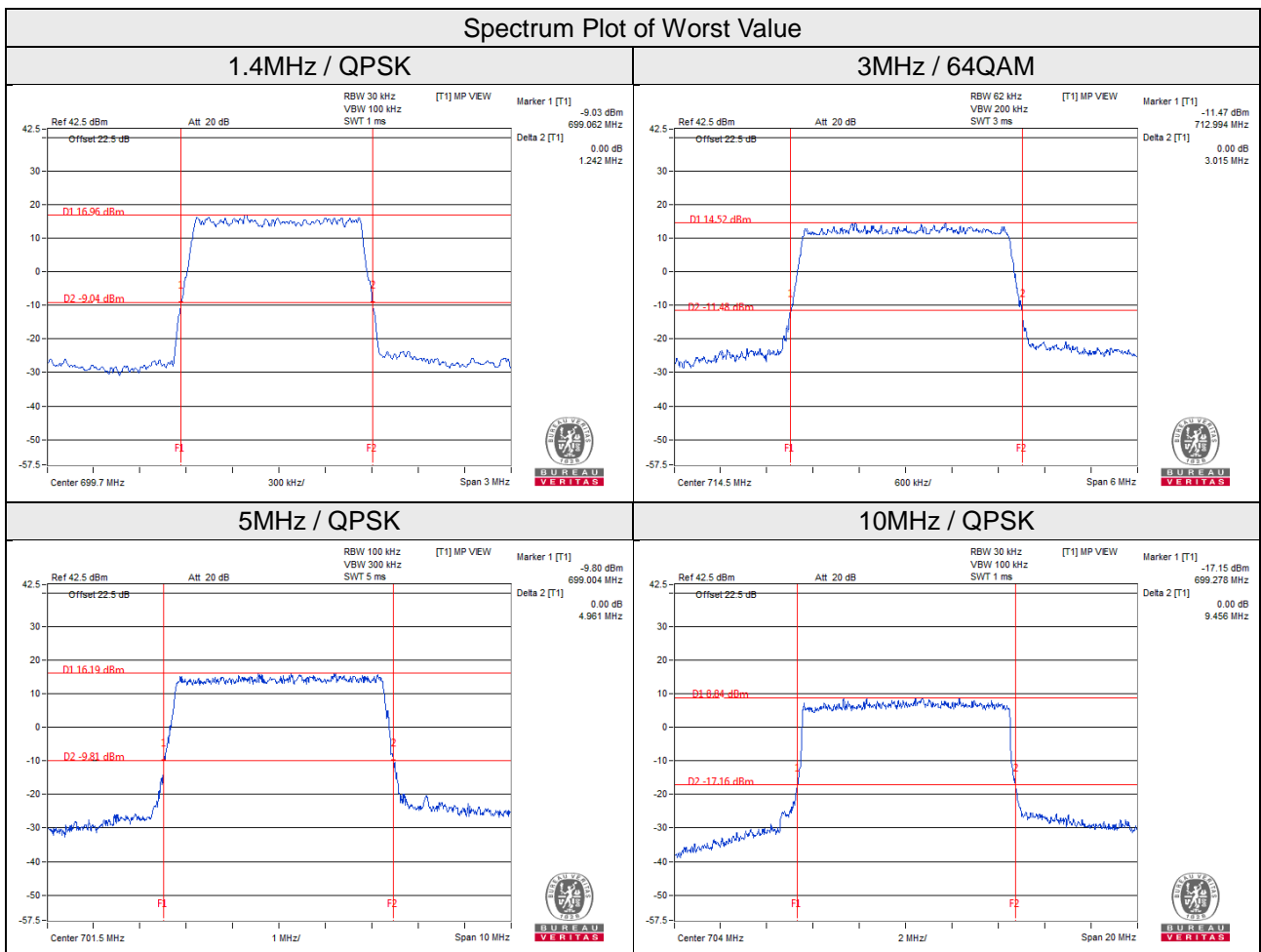
| LTE CA_7C (15+20MHz) | | |
|----------------------|-------------|-----------------------|
| Channel | FREQ. (MHz) | -26dB Bandwidth (MHz) |
| | | QPSK |
| 21100+21271 | 2535+2552.1 | 36.83 |



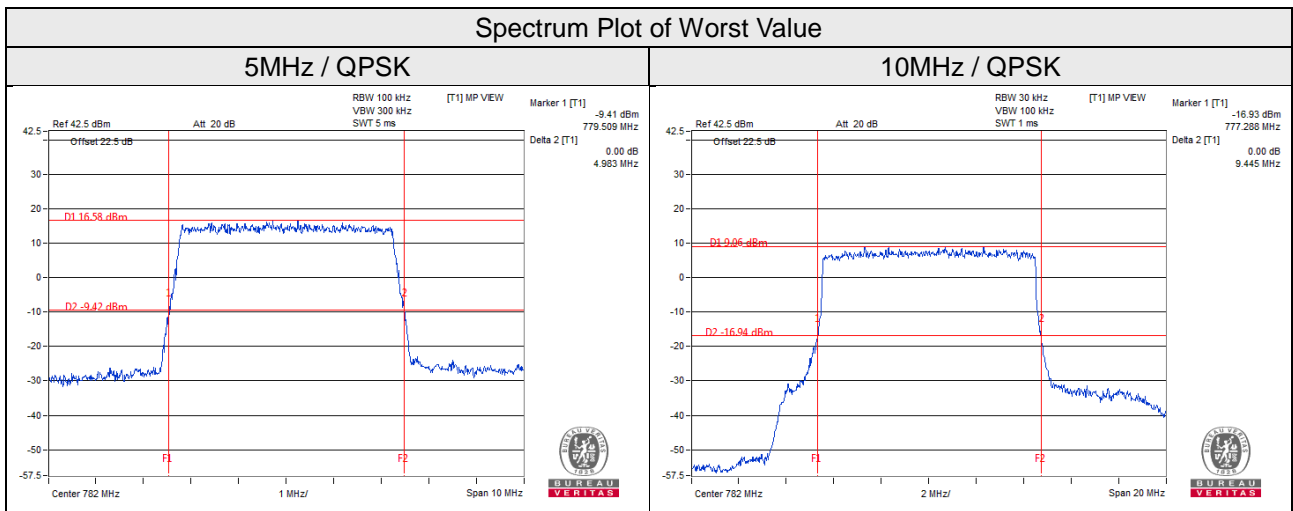
| LTE CA_7C (20+20MHz) | | |
|----------------------|-------------|-----------------------|
| Channel | FREQ. (MHz) | -26dB Bandwidth (MHz) |
| | | QPSK |
| 21152+21350 | 2540.2+2560 | 44.85 |



| LTE Band 12 | | | | | | | | | |
|--------------------------|-----------------|-----------------------|-------|-------|-------------------------|-----------------|-----------------------|-------|-------|
| Channel Bandwidth 1.4MHz | | | | | Channel Bandwidth 3MHz | | | | |
| Channel | Frequency (MHz) | -26dB Bandwidth (MHz) | | | Channel | Frequency (MHz) | -26dB Bandwidth (MHz) | | |
| | | QPSK | 16QAM | 64QAM | | | QPSK | 16QAM | 64QAM |
| 23017 | 699.7 | 1.24 | 1.24 | 1.24 | 23025 | 700.5 | 3.00 | 2.99 | 2.99 |
| 23095 | 707.5 | 1.24 | 1.22 | 1.24 | 23095 | 707.5 | 3.00 | 2.99 | 2.97 |
| 23173 | 715.3 | 1.24 | 1.24 | 1.24 | 23165 | 714.5 | 2.98 | 2.99 | 3.01 |
| Channel Bandwidth 5MHz | | | | | Channel Bandwidth 10MHz | | | | |
| Channel | Frequency (MHz) | -26dB Bandwidth (MHz) | | | Channel | Frequency (MHz) | -26dB Bandwidth (MHz) | | |
| | | QPSK | 16QAM | 64QAM | | | QPSK | 16QAM | 64QAM |
| 23035 | 701.5 | 4.96 | 4.92 | 4.94 | 23060 | 704 | 9.45 | 9.45 | 9.44 |
| 23095 | 707.5 | 4.92 | 4.91 | 4.94 | 23095 | 707.5 | 9.44 | 9.41 | 9.39 |
| 23155 | 713.5 | 4.96 | 4.95 | 4.96 | 23130 | 711 | 9.45 | 9.45 | 9.42 |



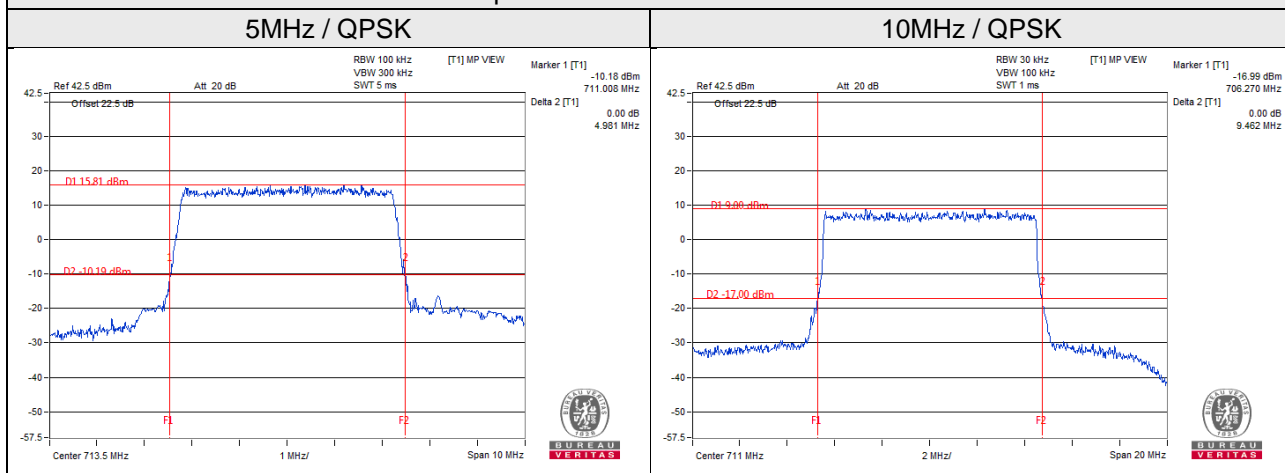
| LTE Band 13 | | | | | | | | | |
|------------------------|-----------------|-----------------------|-------|-------|-------------------------|-----------------|-----------------------|-------|-------|
| Channel Bandwidth 5MHz | | | | | Channel Bandwidth 10MHz | | | | |
| Channel | Frequency (MHz) | -26dB Bandwidth (MHz) | | | Channel | Frequency (MHz) | -26dB Bandwidth (MHz) | | |
| | | QPSK | 16QAM | 64QAM | | | QPSK | 16QAM | 64QAM |
| 23205 | 779.5 | 4.93 | 4.95 | 4.95 | 23230 | 782 | 9.44 | 9.42 | 9.40 |
| 23230 | 782 | 4.98 | 4.95 | 4.94 | | | | | |
| 23255 | 784.5 | 4.93 | 4.96 | 4.91 | | | | | |



LTE Band 17

| Channel Bandwidth 5MHz | | | | | Channel Bandwidth 10MHz | | | | |
|------------------------|-----------------|-----------------------|-------|-------|-------------------------|-----------------|-----------------------|-------|-------|
| Channel | Frequency (MHz) | -26dB Bandwidth (MHz) | | | Channel | Frequency (MHz) | -26dB Bandwidth (MHz) | | |
| | | QPSK | 16QAM | 64QAM | | | QPSK | 16QAM | 64QAM |
| 23755 | 706.5 | 4.93 | 4.95 | 4.93 | 23780 | 709 | 9.44 | 9.45 | 9.41 |
| 23790 | 710 | 4.95 | 4.92 | 4.90 | 23790 | 710 | 9.45 | 9.44 | 9.39 |
| 23825 | 713.5 | 4.98 | 4.94 | 4.94 | 23800 | 711 | 9.46 | 9.45 | 9.41 |

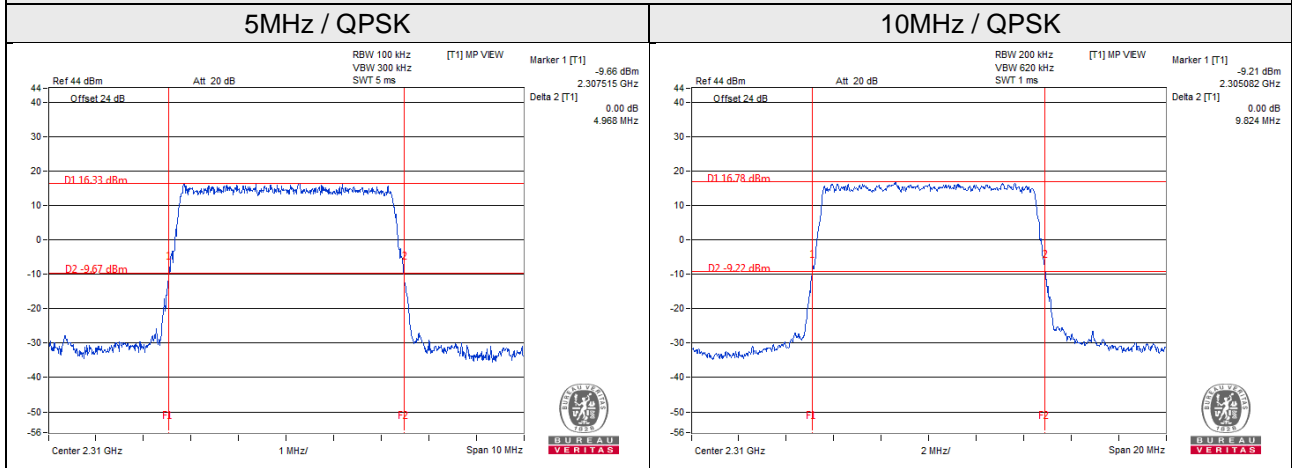
Spectrum Plot of Worst Value



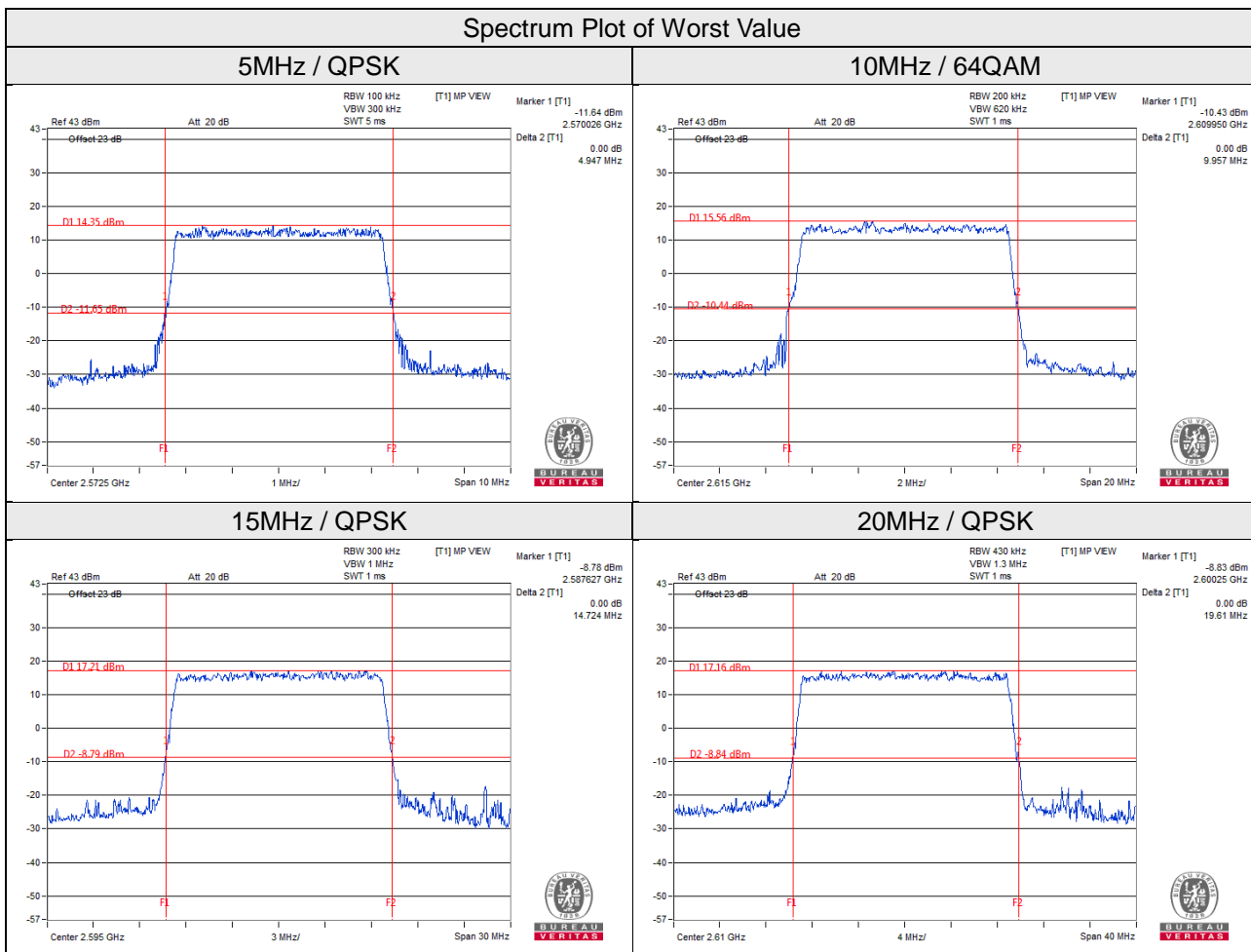
LTE Band 30

| Channel Bandwidth 5MHz | | | | | Channel Bandwidth 10MHz | | | | |
|------------------------|-----------------|-----------------------|-------|-------|-------------------------|-----------------|-----------------------|-------|-------|
| Channel | Frequency (MHz) | -26dB Bandwidth (MHz) | | | Channel | Frequency (MHz) | -26dB Bandwidth (MHz) | | |
| | | QPSK | 16QAM | 64QAM | | | QPSK | 16QAM | 64QAM |
| 27685 | 2307.5 | 4.95 | 4.93 | 4.87 | 27710 | 2310 | 9.82 | 9.80 | 9.81 |
| 27710 | 2310 | 4.96 | 4.92 | 4.92 | | | | | |
| 27735 | 2312.5 | 4.94 | 4.93 | 4.91 | | | | | |

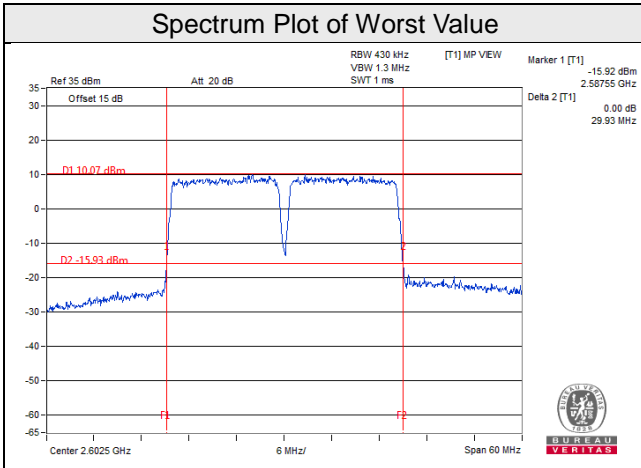
Spectrum Plot of Worst Value



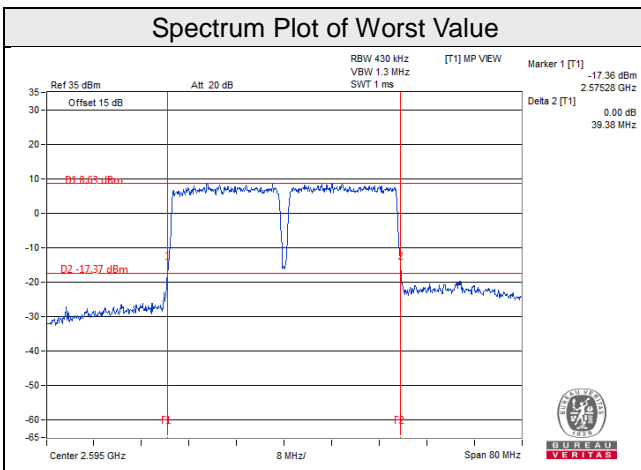
| LTE Band 38 | | | | | | | | | |
|-------------------------|-----------------|-----------------------|-------|-------|-------------------------|-----------------|-----------------------|-------|-------|
| Channel Bandwidth 5MHz | | | | | Channel Bandwidth 10MHz | | | | |
| Channel | Frequency (MHz) | -26dB Bandwidth (MHz) | | | Channel | Frequency (MHz) | -26dB Bandwidth (MHz) | | |
| | | QPSK | 16QAM | 64QAM | | | QPSK | 16QAM | 64QAM |
| 37775 | 2572.5 | 4.94 | 4.89 | 4.91 | 37800 | 2575 | 9.78 | 9.84 | 9.86 |
| 38000 | 2595 | 4.94 | 4.94 | 4.88 | 38000 | 2595 | 9.78 | 9.81 | 9.87 |
| 38225 | 2617.5 | 4.92 | 4.91 | 4.93 | 38200 | 2615 | 9.79 | 9.76 | 9.95 |
| Channel Bandwidth 15MHz | | | | | Channel Bandwidth 20MHz | | | | |
| Channel | Frequency (MHz) | -26dB Bandwidth (MHz) | | | Channel | Frequency (MHz) | -26dB Bandwidth (MHz) | | |
| | | QPSK | 16QAM | 64QAM | | | QPSK | 16QAM | 64QAM |
| 37825 | 2577.5 | 14.64 | 14.64 | 14.71 | 37850 | 2580 | 19.49 | 19.44 | 19.38 |
| 38000 | 2595 | 14.72 | 14.66 | 14.68 | 38000 | 2595 | 19.40 | 19.41 | 19.42 |
| 38175 | 2612.5 | 14.69 | 14.69 | 14.61 | 38150 | 2610 | 19.61 | 19.44 | 19.45 |



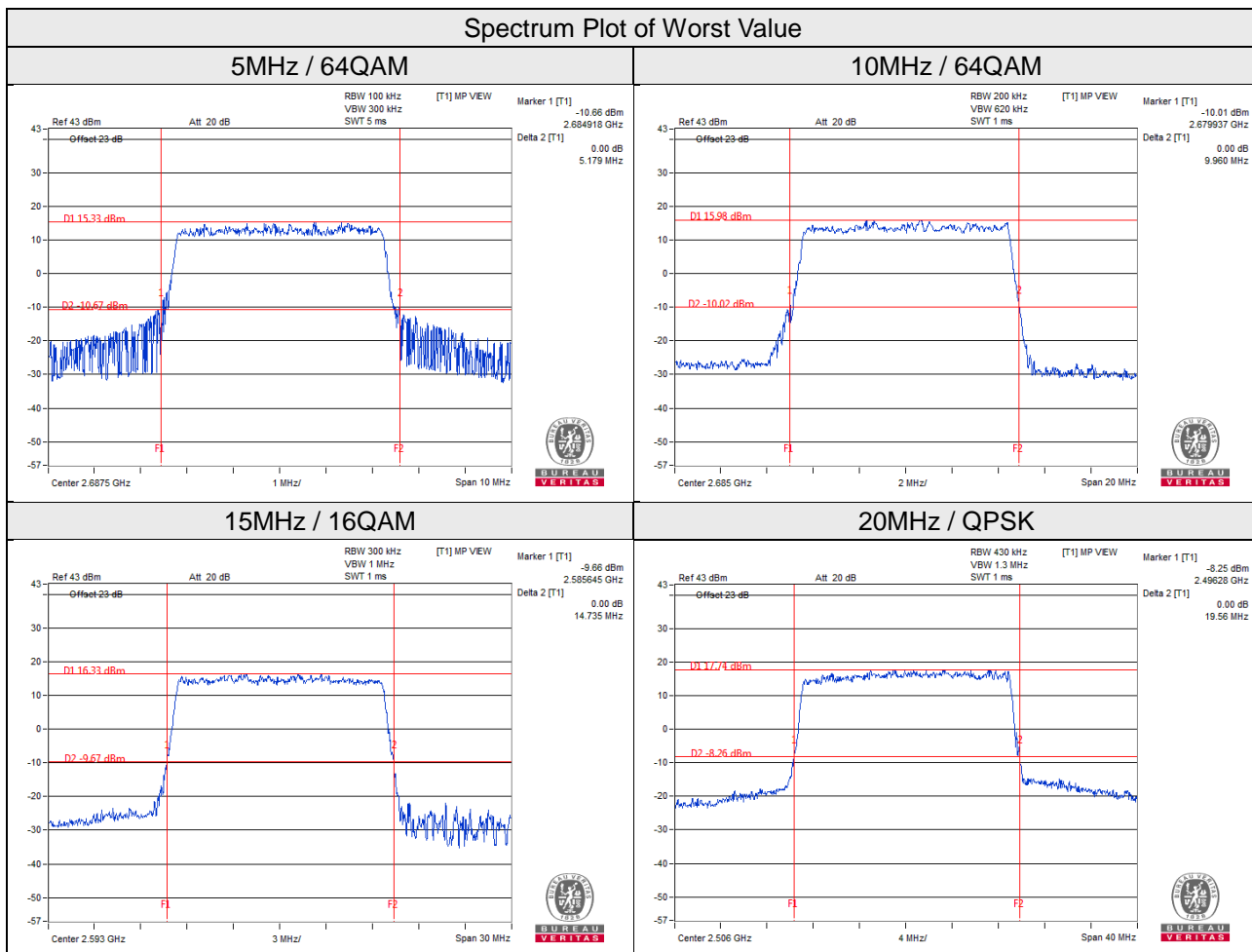
| LTE CA_38C (15+15MHz) | | |
|-----------------------|-------------|-----------------------|
| Channel | FREQ. (MHz) | -26dB Bandwidth (MHz) |
| | | QPSK |
| 38000+38150 | 2595+2610 | 29.93 |



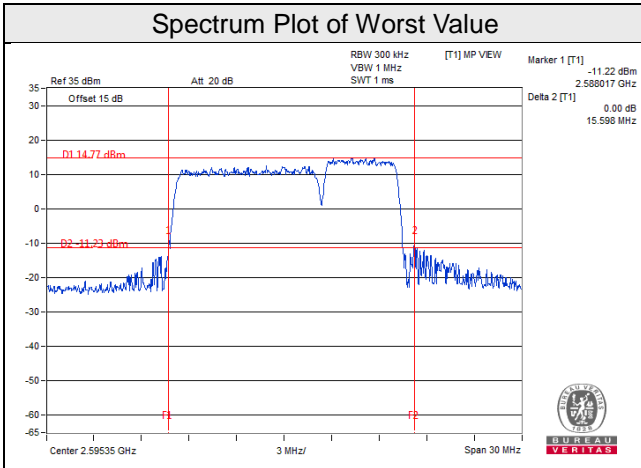
| LTE CA_38C (20+20MHz) | | |
|-----------------------|-------------|-----------------------|
| Channel | FREQ. (MHz) | -26dB Bandwidth (MHz) |
| | | QPSK |
| 37952+38150 | 2590.2+2610 | 39.38 |



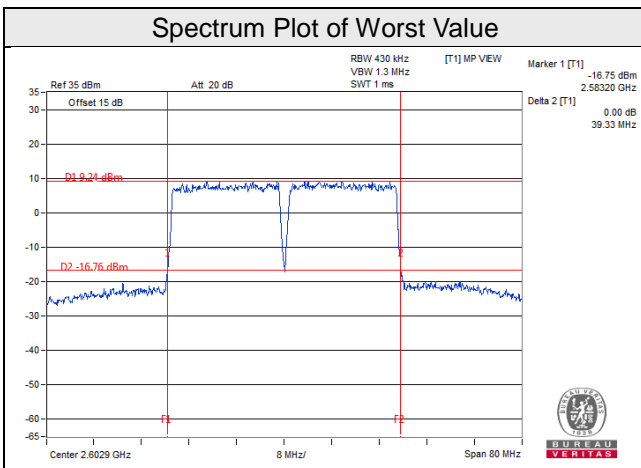
| LTE Band 41 | | | | | | | | | |
|-------------------------|-----------------|-----------------------|-------|-------|-------------------------|-----------------|-----------------------|-------|-------|
| Channel Bandwidth 5MHz | | | | | Channel Bandwidth 10MHz | | | | |
| Channel | Frequency (MHz) | -26dB Bandwidth (MHz) | | | Channel | Frequency (MHz) | -26dB Bandwidth (MHz) | | |
| | | QPSK | 16QAM | 64QAM | | | QPSK | 16QAM | 64QAM |
| 39675 | 2498.5 | 5.00 | 5.06 | 5.15 | 39700 | 2501 | 9.81 | 9.75 | 9.96 |
| 40620 | 2593 | 4.96 | 4.94 | 4.90 | 50620 | 2593 | 9.78 | 9.83 | 9.85 |
| 41565 | 2687.5 | 4.91 | 5.14 | 5.17 | 41540 | 2685 | 9.80 | 9.86 | 9.96 |
| Channel Bandwidth 15MHz | | | | | Channel Bandwidth 20MHz | | | | |
| Channel | Frequency (MHz) | -26dB Bandwidth (MHz) | | | Channel | Frequency (MHz) | -26dB Bandwidth (MHz) | | |
| | | QPSK | 16QAM | 64QAM | | | QPSK | 16QAM | 64QAM |
| 39725 | 2503.5 | 14.63 | 14.63 | 14.64 | 39750 | 2506 | 19.56 | 19.38 | 19.41 |
| 40620 | 2593 | 14.65 | 14.73 | 14.64 | 40620 | 2593 | 19.48 | 19.49 | 19.51 |
| 41515 | 2682.5 | 14.69 | 14.69 | 14.71 | 41490 | 2680 | 19.40 | 19.35 | 19.42 |



| LTE CA_41C (10+5MHz) | | |
|----------------------|-------------|-----------------------|
| Channel | FREQ. (MHz) | -26dB Bandwidth (MHz) |
| | | QPSK |
| 40620+40692 | 2593+2600.2 | 15.59 |



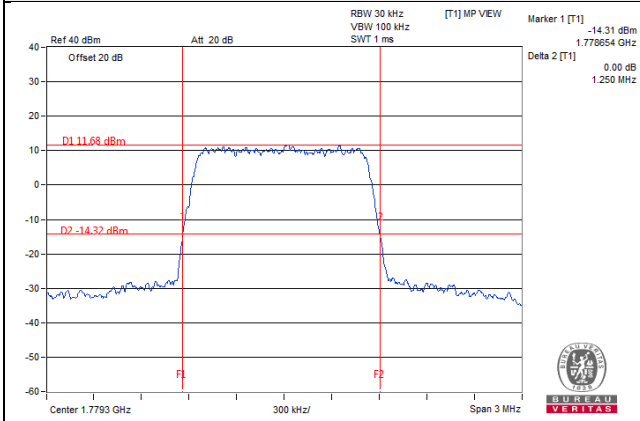
| LTE CA_41C (20+20MHz) | | |
|-----------------------|-------------|-----------------------|
| Channel | FREQ. (MHz) | -26dB Bandwidth (MHz) |
| | | QPSK |
| 40620+40818 | 2593+2612.8 | 39.33 |



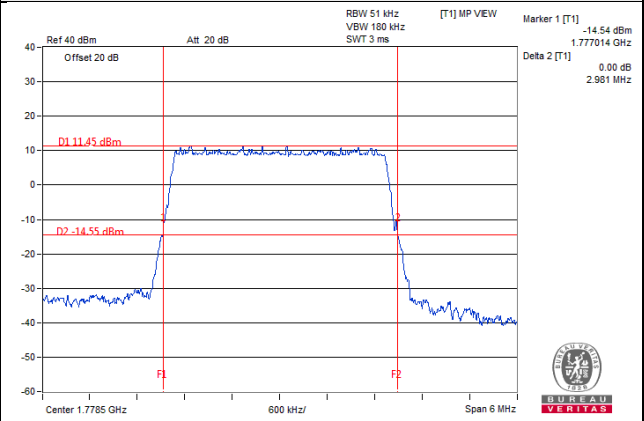
| LTE Band 66 | | | | | | | | | |
|--------------------------|-----------------|-----------------------|-------|-------|-------------------------|-----------------|-----------------------|-------|-------|
| Channel Bandwidth 1.4MHz | | | | | Channel Bandwidth 3MHz | | | | |
| Channel | Frequency (MHz) | -26dB Bandwidth (MHz) | | | Channel | Frequency (MHz) | -26dB Bandwidth (MHz) | | |
| | | QPSK | 16QAM | 64QAM | | | QPSK | 16QAM | 64QAM |
| 131979 | 1710.7 | 1.23 | 1.24 | 1.23 | 131987 | 1711.5 | 2.94 | 2.94 | 2.94 |
| 132322 | 1745 | 1.23 | 1.23 | 1.24 | 132322 | 1745 | 2.97 | 2.94 | 2.95 |
| 132665 | 1779.3 | 1.23 | 1.25 | 1.23 | 132657 | 1778.5 | 2.98 | 2.96 | 2.98 |
| Channel Bandwidth 5MHz | | | | | Channel Bandwidth 10MHz | | | | |
| Channel | Frequency (MHz) | -26dB Bandwidth (MHz) | | | Channel | Frequency (MHz) | -26dB Bandwidth (MHz) | | |
| | | QPSK | 16QAM | 64QAM | | | QPSK | 16QAM | 64QAM |
| 131997 | 1712.5 | 4.91 | 4.95 | 4.91 | 132022 | 1715 | 9.81 | 9.86 | 9.82 |
| 132322 | 1745 | 4.90 | 4.94 | 4.95 | 132322 | 1745 | 9.85 | 9.84 | 9.81 |
| 132647 | 1777.5 | 4.95 | 4.93 | 4.94 | 132622 | 1775 | 9.80 | 9.85 | 9.78 |
| Channel Bandwidth 15MHz | | | | | Channel Bandwidth 20MHz | | | | |
| Channel | Frequency (MHz) | -26dB Bandwidth (MHz) | | | Channel | Frequency (MHz) | -26dB Bandwidth (MHz) | | |
| | | QPSK | 16QAM | 64QAM | | | QPSK | 16QAM | 64QAM |
| 132047 | 1717.5 | 14.65 | 14.65 | 14.70 | 132072 | 1720 | 19.52 | 19.41 | 19.36 |
| 132322 | 1745 | 14.72 | 14.70 | 14.66 | 132322 | 1745 | 19.45 | 19.52 | 19.50 |
| 132597 | 1722.5 | 14.73 | 14.68 | 14.71 | 132572 | 1770 | 19.56 | 19.45 | 19.39 |

Spectrum Plot of Worst Value

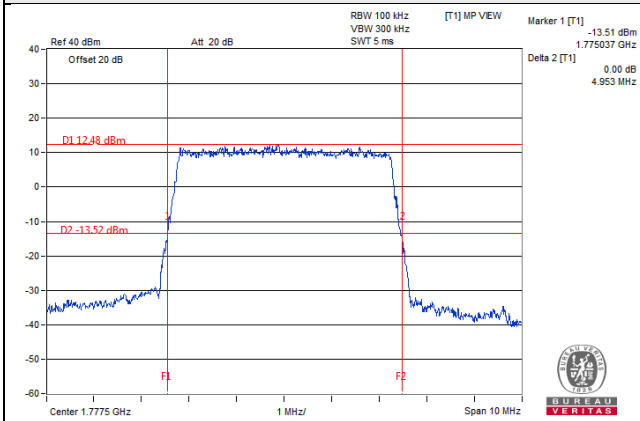
1.4MHz / 16QAM



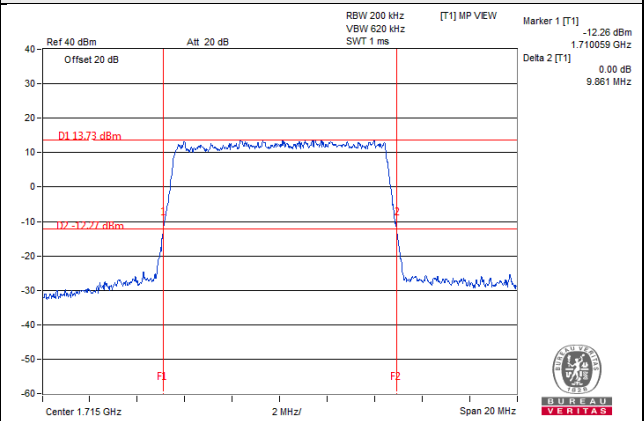
3MHz / QPSK



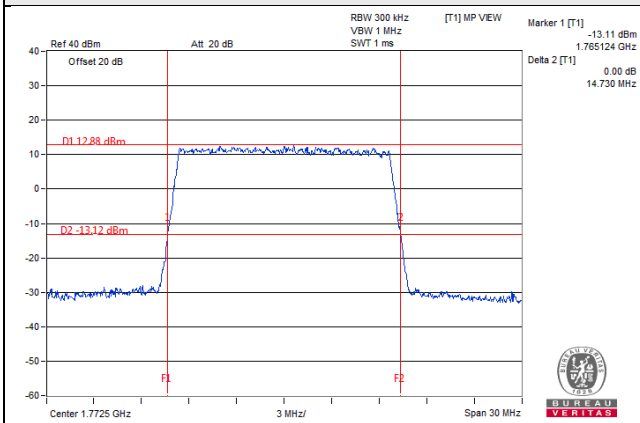
5MHz / QPSK



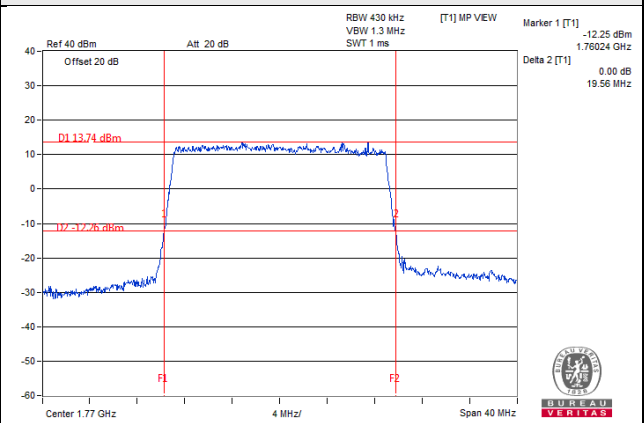
10MHz / 16QAM



15MHz / QPSK

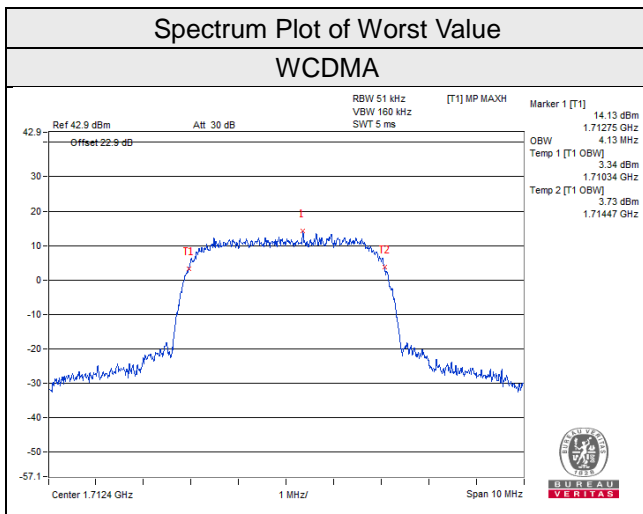


20MHz / QPSK



4.4.5 Test Results (Occupied Bandwidth)

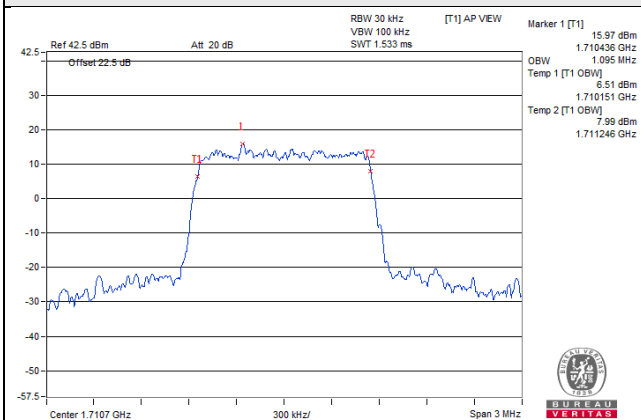
| Channel | FREQ. (MHz) | Occupied Bandwidth (MHz) |
|---------|-------------|--------------------------|
| | | WCDMA |
| 1312 | 1712.4 | 4.13 |
| 1413 | 1732.6 | 4.11 |
| 1513 | 1752.6 | 4.13 |



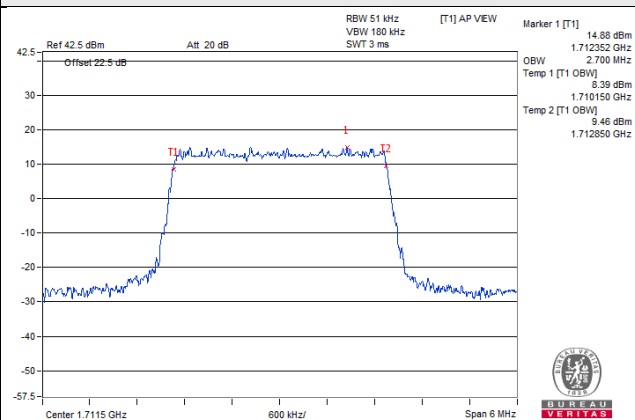
| LTE Band 4 | | | | | | | | | |
|--------------------------|-----------------|--------------------------|-------|-------|-------------------------|-----------------|--------------------------|-------|-------|
| Channel Bandwidth 1.4MHz | | | | | Channel Bandwidth 3MHz | | | | |
| Channel | Frequency (MHz) | Occupied Bandwidth (MHz) | | | Channel | Frequency (MHz) | Occupied Bandwidth (MHz) | | |
| | | QPSK | 16QAM | 64QAM | | | QPSK | 16QAM | 64QAM |
| 19957 | 1710.7 | 1.08 | 1.09 | 1.08 | 19965 | 1711.5 | 2.70 | 2.68 | 2.69 |
| 20175 | 1732.5 | 1.08 | 1.09 | 1.09 | 20175 | 1732.5 | 2.70 | 2.68 | 2.69 |
| 20393 | 1754.3 | 1.08 | 1.09 | 1.08 | 20385 | 1753.5 | 2.70 | 2.68 | 2.70 |
| Channel Bandwidth 5MHz | | | | | Channel Bandwidth 10MHz | | | | |
| Channel | Frequency (MHz) | Occupied Bandwidth (MHz) | | | Channel | Frequency (MHz) | Occupied Bandwidth (MHz) | | |
| | | QPSK | 16QAM | 64QAM | | | QPSK | 16QAM | 64QAM |
| 19975 | 1712.5 | 4.49 | 4.51 | 4.50 | 20000 | 1715 | 9.00 | 9.00 | 8.98 |
| 20175 | 1732.5 | 4.51 | 4.50 | 4.51 | 20175 | 1732.5 | 8.98 | 9.00 | 8.98 |
| 20375 | 1752.5 | 4.49 | 4.51 | 4.51 | 20350 | 1750 | 9.00 | 9.00 | 9.00 |
| Channel Bandwidth 15MHz | | | | | Channel Bandwidth 20MHz | | | | |
| Channel | Frequency (MHz) | Occupied Bandwidth (MHz) | | | Channel | Frequency (MHz) | Occupied Bandwidth (MHz) | | |
| | | QPSK | 16QAM | 64QAM | | | QPSK | 16QAM | 64QAM |
| 20025 | 1717.5 | 13.47 | 13.44 | 13.47 | 20050 | 1720 | 17.96 | 17.88 | 17.92 |
| 20175 | 1732.5 | 13.50 | 13.47 | 13.50 | 20175 | 1732.5 | 18.00 | 17.88 | 17.96 |
| 20325 | 1747.5 | 13.50 | 13.50 | 13.50 | 20300 | 1745 | 18.04 | 17.92 | 17.96 |

Spectrum Plot of Worst Value

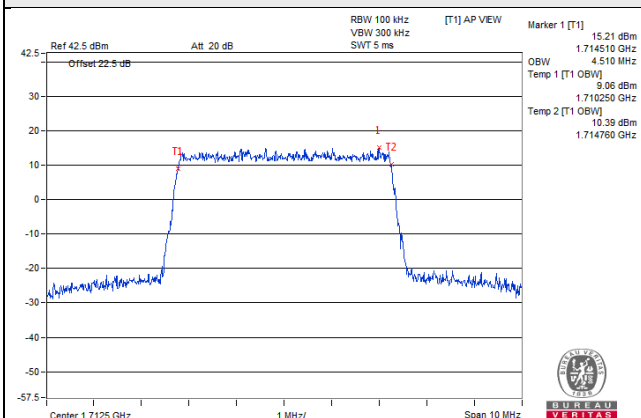
1.4MHz / 16QAM



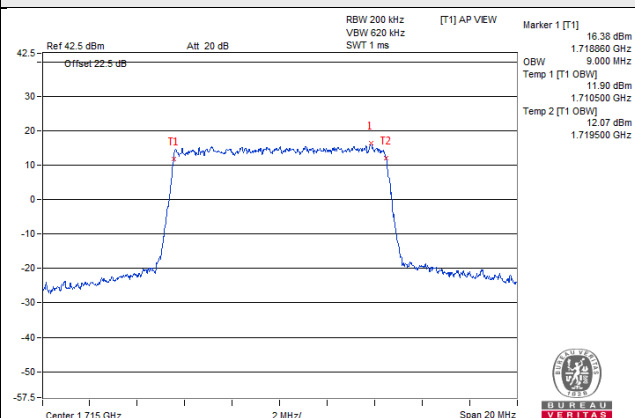
3MHz / QPSK



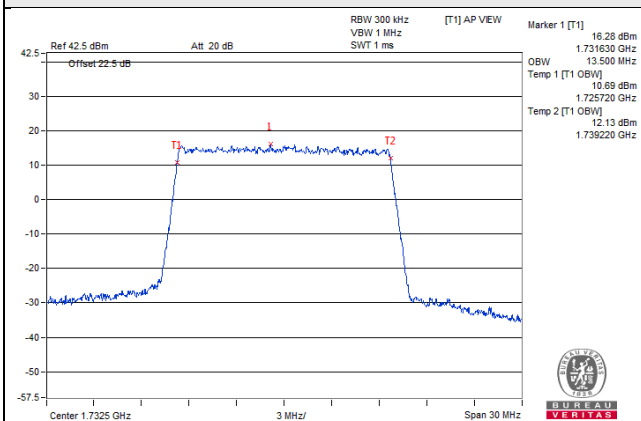
5MHz / 16QAM



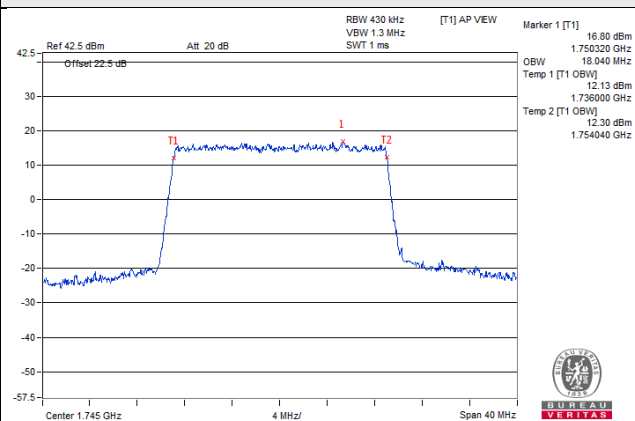
10MHz / QPSK



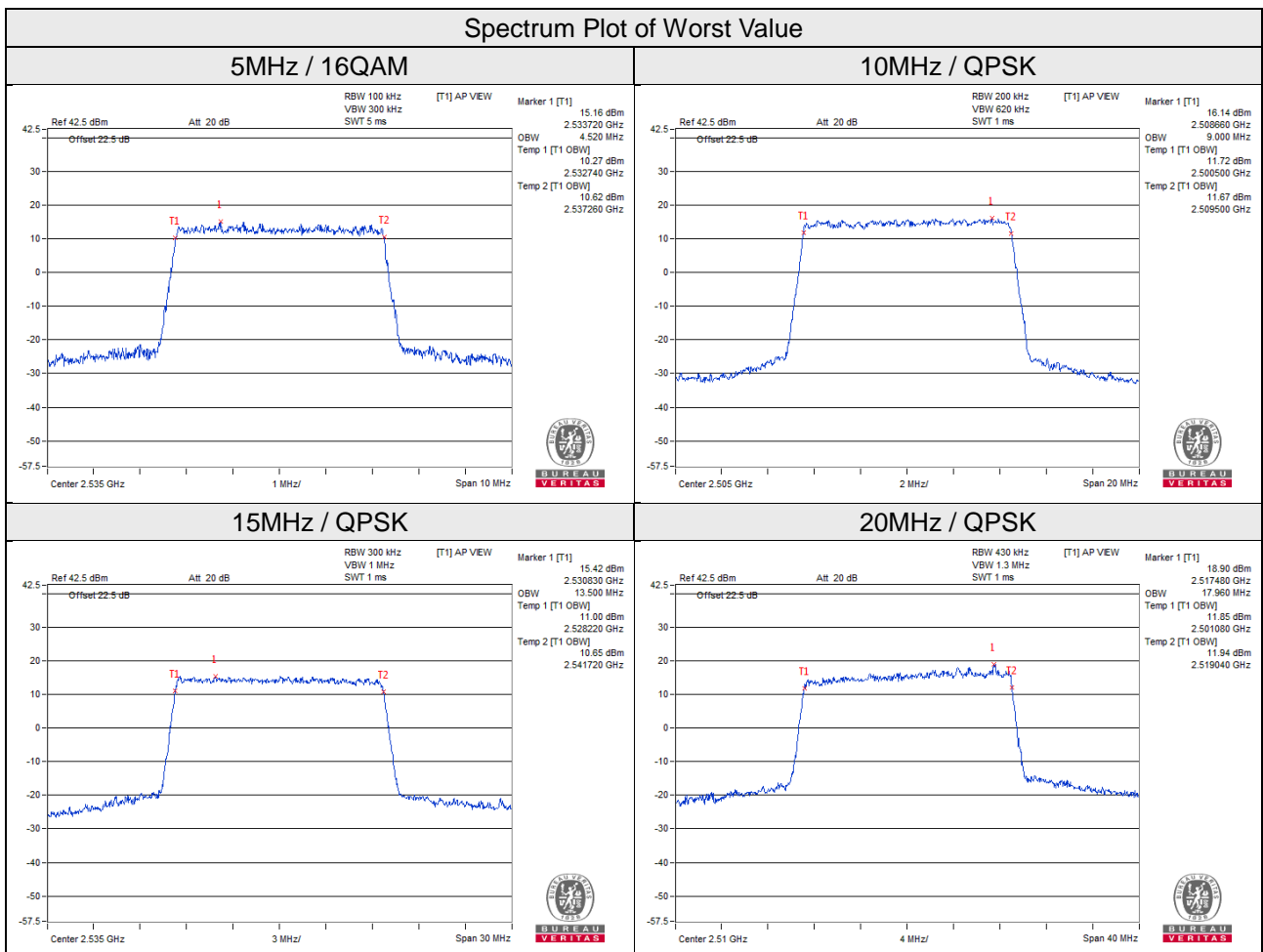
15MHz / QPSK



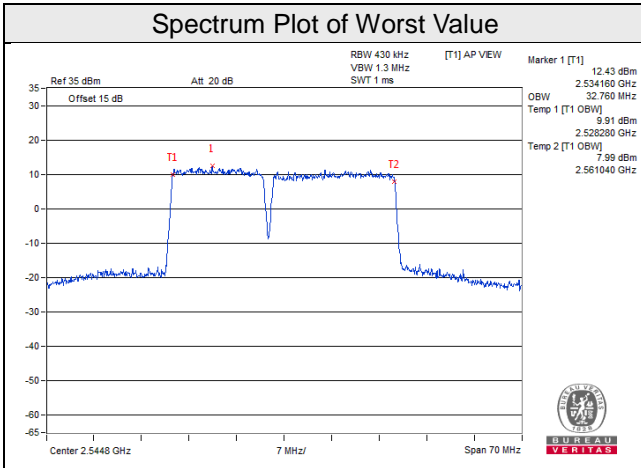
20MHz / QPSK



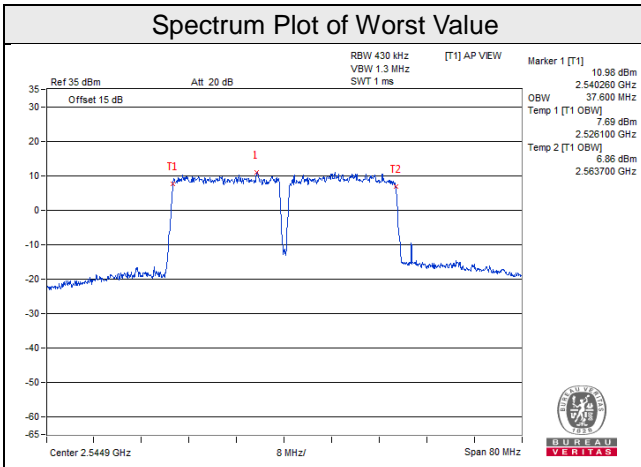
| LTE Band 7 | | | | | | | | | |
|-------------------------|-----------------|--------------------------|-------|-------|-------------------------|-----------------|--------------------------|-------|-------|
| Channel Bandwidth 5MHz | | | | | Channel Bandwidth 10MHz | | | | |
| Channel | Frequency (MHz) | Occupied Bandwidth (MHz) | | | Channel | Frequency (MHz) | Occupied Bandwidth (MHz) | | |
| | | QPSK | 16QAM | 64QAM | | | QPSK | 16QAM | 64QAM |
| 20775 | 2502.5 | 4.50 | 4.51 | 4.51 | 20800 | 2505 | 9.00 | 9.00 | 8.98 |
| 21100 | 2535 | 4.51 | 4.52 | 4.50 | 21100 | 2535 | 9.00 | 9.00 | 9.00 |
| 21425 | 2567.5 | 4.51 | 4.51 | 4.51 | 21400 | 2565 | 9.00 | 8.98 | 9.00 |
| Channel Bandwidth 15MHz | | | | | Channel Bandwidth 20MHz | | | | |
| Channel | Frequency (MHz) | Occupied Bandwidth (MHz) | | | Channel | Frequency (MHz) | Occupied Bandwidth (MHz) | | |
| | | QPSK | 16QAM | 64QAM | | | QPSK | 16QAM | 64QAM |
| 20825 | 2507.5 | 13.47 | 13.47 | 13.44 | 20850 | 2510 | 17.96 | 17.88 | 17.92 |
| 21100 | 2535 | 13.50 | 13.47 | 13.50 | 21100 | 2535 | 17.96 | 17.92 | 17.92 |
| 21375 | 2562.5 | 13.44 | 13.44 | 13.47 | 21350 | 2560 | 17.96 | 17.88 | 17.92 |



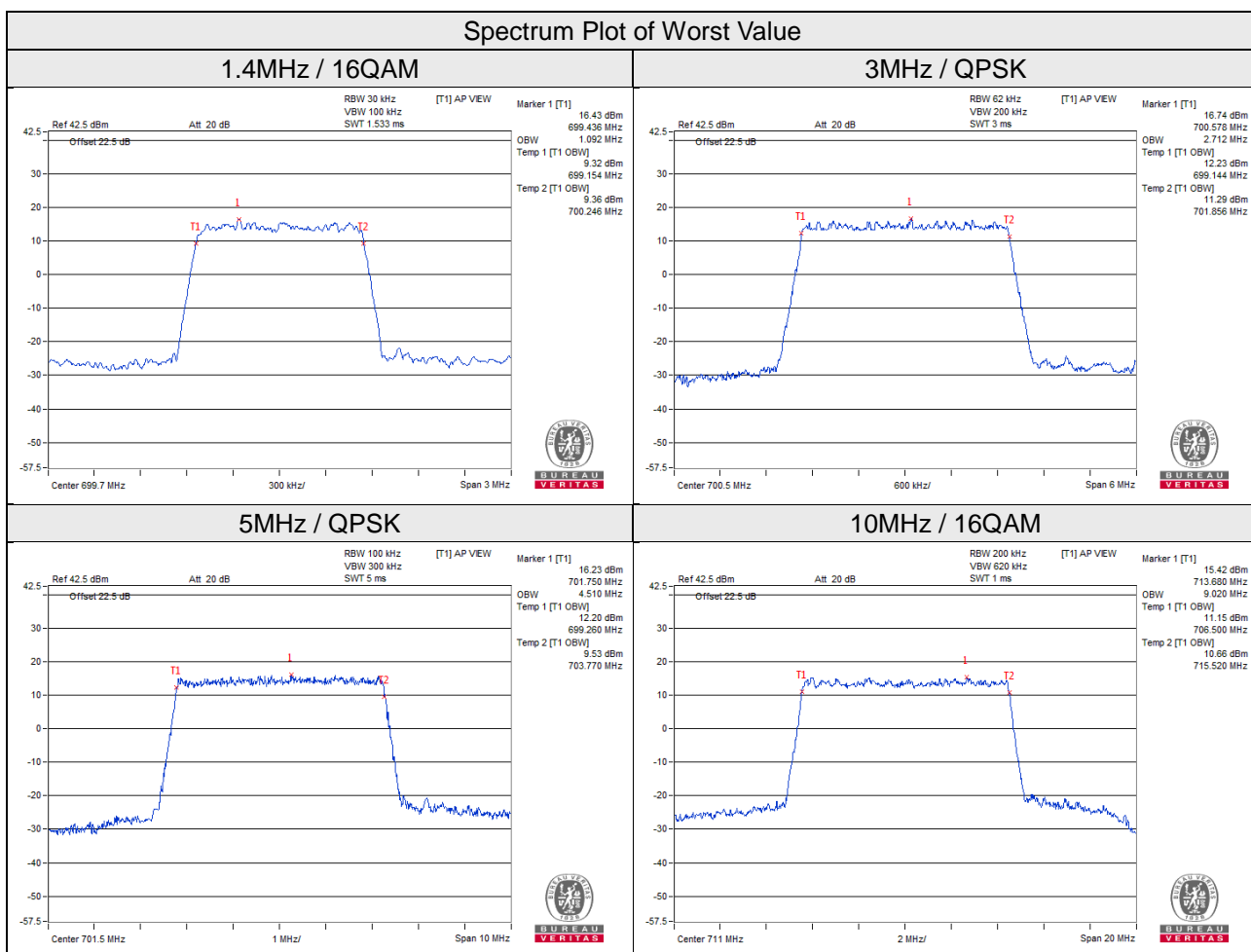
| LTE CA_7C (15+20MHz) | | |
|----------------------|-------------|--------------------------|
| Channel | FREQ. (MHz) | Occupied Bandwidth (MHz) |
| | | QPSK |
| 21100+21271 | 2535+2552.1 | 32.76 |



| LTE CA_7C (20+20MHz) | | |
|----------------------|-------------|--------------------------|
| Channel | FREQ. (MHz) | Occupied Bandwidth (MHz) |
| | | QPSK |
| 21152+21350 | 2540.2+2560 | 37.60 |



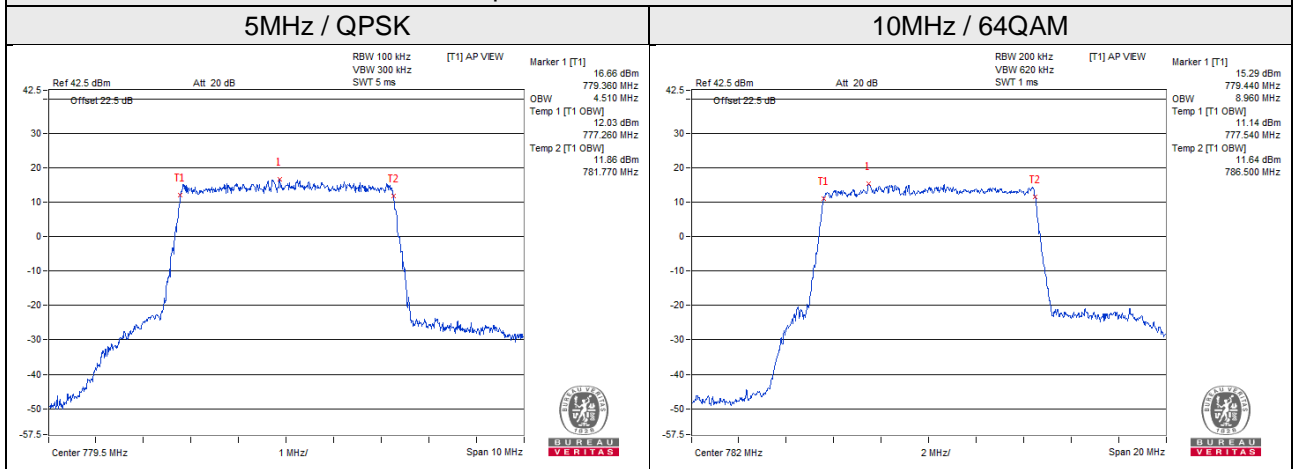
| LTE Band 12 | | | | | | | | | |
|--------------------------|-----------------|--------------------------|-------|-------|-------------------------|-----------------|--------------------------|-------|-------|
| Channel Bandwidth 1.4MHz | | | | | Channel Bandwidth 3MHz | | | | |
| Channel | Frequency (MHz) | Occupied Bandwidth (MHz) | | | Channel | Frequency (MHz) | Occupied Bandwidth (MHz) | | |
| | | QPSK | 16QAM | 64QAM | | | QPSK | 16QAM | 64QAM |
| 23017 | 699.7 | 1.08 | 1.09 | 1.09 | 23025 | 700.5 | 2.71 | 2.69 | 2.70 |
| 23095 | 707.5 | 1.08 | 1.09 | 1.09 | 23095 | 707.5 | 2.70 | 2.68 | 2.70 |
| 23173 | 715.3 | 1.08 | 1.09 | 1.09 | 23165 | 714.5 | 2.71 | 2.69 | 2.70 |
| Channel Bandwidth 5MHz | | | | | Channel Bandwidth 10MHz | | | | |
| Channel | Frequency (MHz) | Occupied Bandwidth (MHz) | | | Channel | Frequency (MHz) | Occupied Bandwidth (MHz) | | |
| | | QPSK | 16QAM | 64QAM | | | QPSK | 16QAM | 64QAM |
| 23035 | 701.5 | 4.51 | 4.50 | 4.50 | 23060 | 704 | 9.00 | 8.98 | 8.98 |
| 23095 | 707.5 | 4.48 | 4.51 | 4.49 | 23095 | 707.5 | 8.98 | 8.98 | 8.98 |
| 23155 | 713.5 | 4.50 | 4.51 | 4.50 | 23130 | 711 | 9.00 | 9.02 | 8.98 |



LTE Band 13

| Channel Bandwidth 5MHz | | | | | Channel Bandwidth 10MHz | | | | |
|------------------------|-----------------|--------------------------|-------|-------|-------------------------|-----------------|--------------------------|-------|-------|
| Channel | Frequency (MHz) | Occupied Bandwidth (MHz) | | | Channel | Frequency (MHz) | Occupied Bandwidth (MHz) | | |
| | | QPSK | 16QAM | 64QAM | | | QPSK | 16QAM | 64QAM |
| 23205 | 779.5 | 4.51 | 4.50 | 4.49 | 23230 | 782 | 8.90 | 8.92 | 8.96 |
| 23230 | 782 | 4.51 | 4.50 | 4.49 | | | | | |
| 23255 | 784.5 | 4.51 | 4.51 | 4.49 | | | | | |

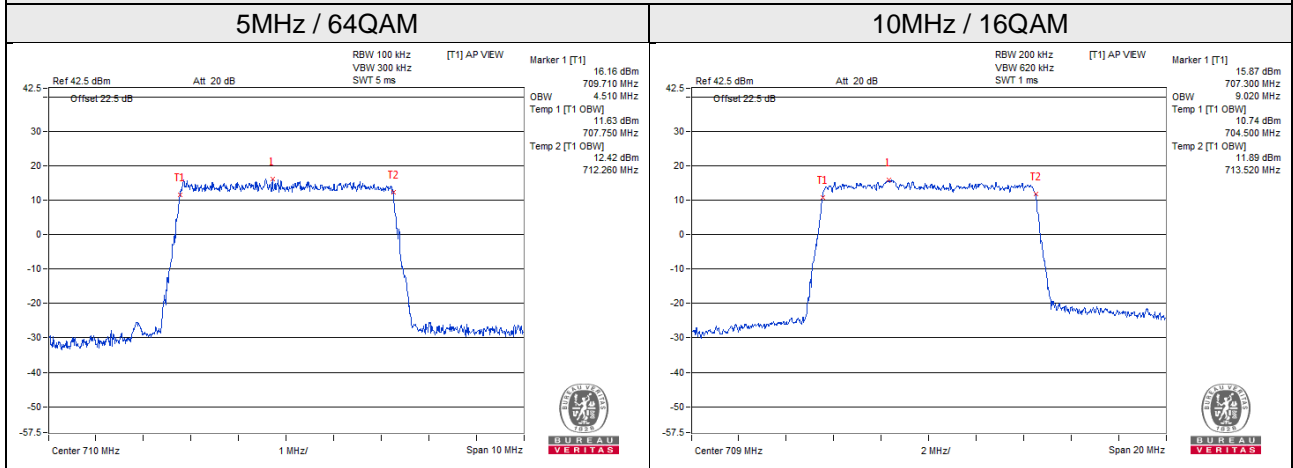
Spectrum Plot of Worst Value



LTE Band 17

| Channel Bandwidth 5MHz | | | | | Channel Bandwidth 10MHz | | | | |
|------------------------|-----------------|--------------------------|-------|-------|-------------------------|-----------------|--------------------------|-------|-------|
| Channel | Frequency (MHz) | Occupied Bandwidth (MHz) | | | Channel | Frequency (MHz) | Occupied Bandwidth (MHz) | | |
| | | QPSK | 16QAM | 64QAM | | | QPSK | 16QAM | 64QAM |
| 23755 | 706.5 | 4.50 | 4.51 | 4.51 | 23780 | 709 | 9.00 | 9.02 | 9.02 |
| 23790 | 710 | 4.51 | 4.50 | 4.51 | 23790 | 710 | 9.00 | 9.02 | 9.00 |
| 23825 | 713.5 | 4.50 | 4.51 | 4.49 | 23800 | 711 | 9.00 | 9.02 | 9.02 |

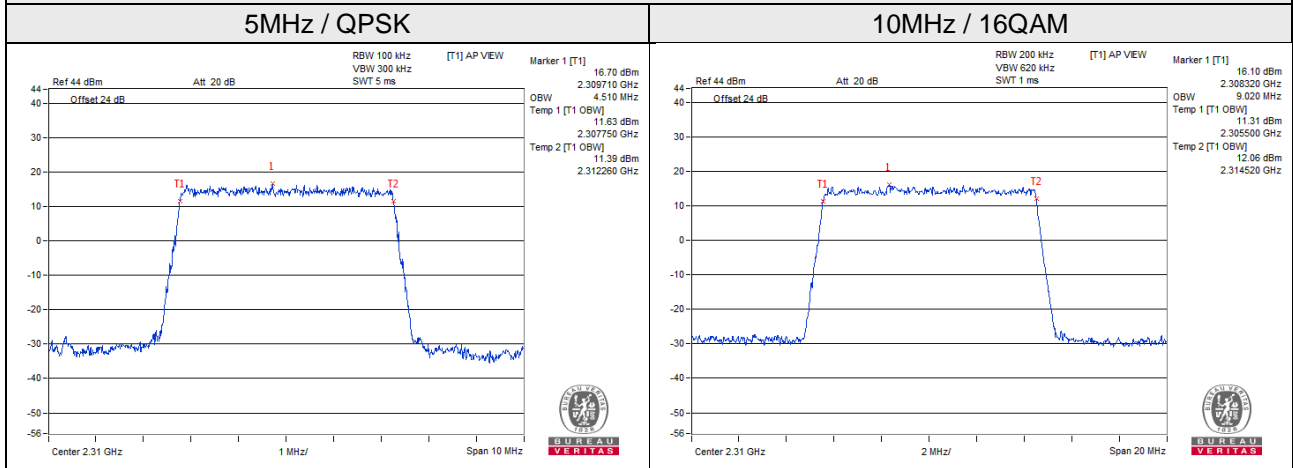
Spectrum Plot of Worst Value



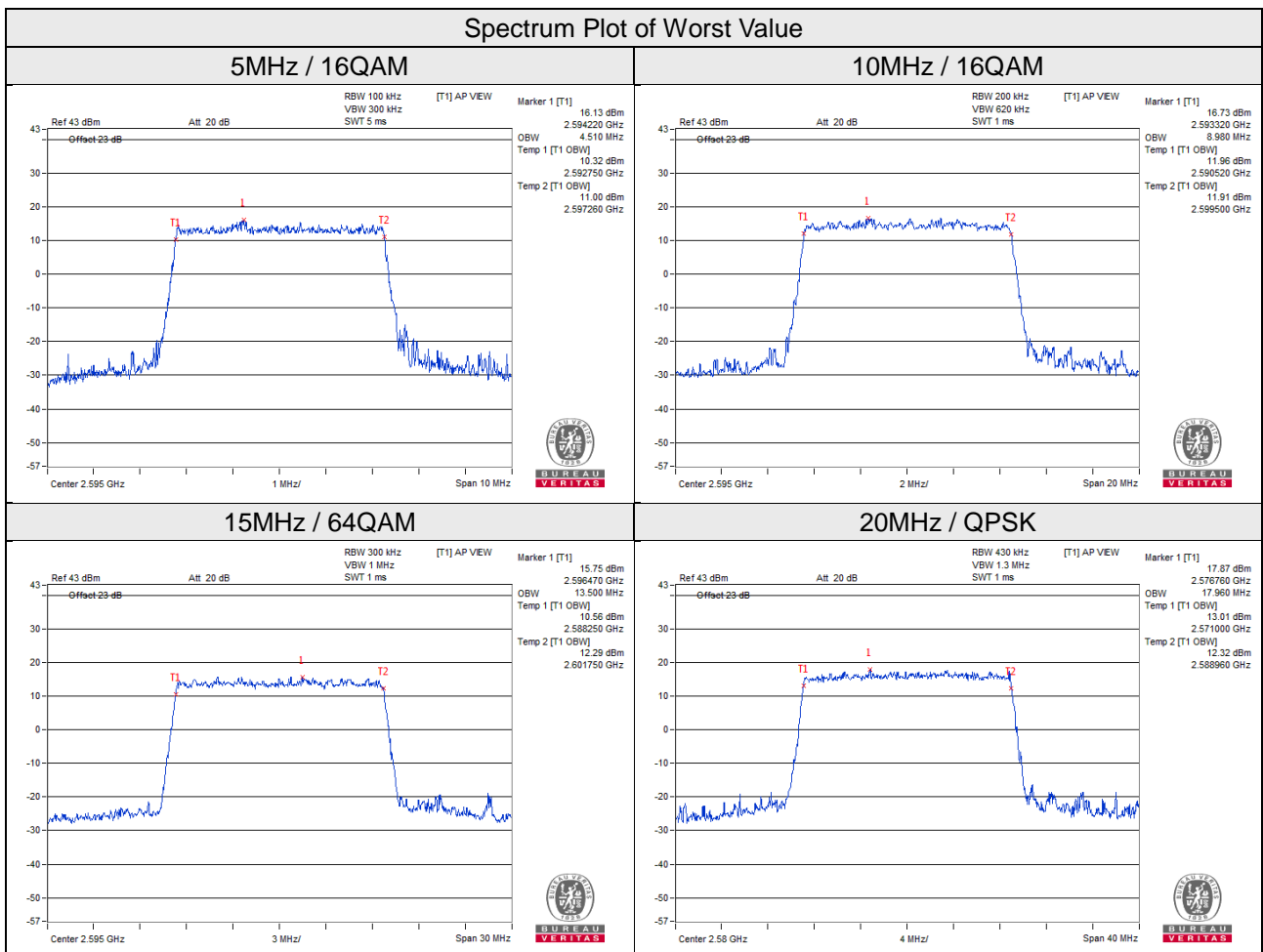
LTE Band 30

| Channel Bandwidth 5MHz | | | | | Channel Bandwidth 10MHz | | | | |
|------------------------|-----------------|--------------------------|-------|-------|-------------------------|-----------------|--------------------------|-------|-------|
| Channel | Frequency (MHz) | Occupied Bandwidth (MHz) | | | Channel | Frequency (MHz) | Occupied Bandwidth (MHz) | | |
| | | QPSK | 16QAM | 64QAM | | | QPSK | 16QAM | 64QAM |
| 27685 | 2307.5 | 4.50 | 4.50 | 4.50 | 27710 | 2310 | 9.00 | 9.02 | 8.98 |
| 27710 | 2310 | 4.51 | 4.50 | 4.51 | | | | | |
| 27735 | 2312.5 | 4.51 | 4.50 | 4.49 | | | | | |

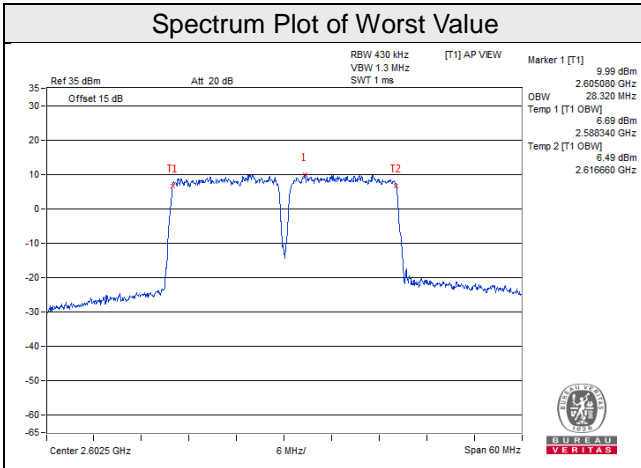
Spectrum Plot of Worst Value



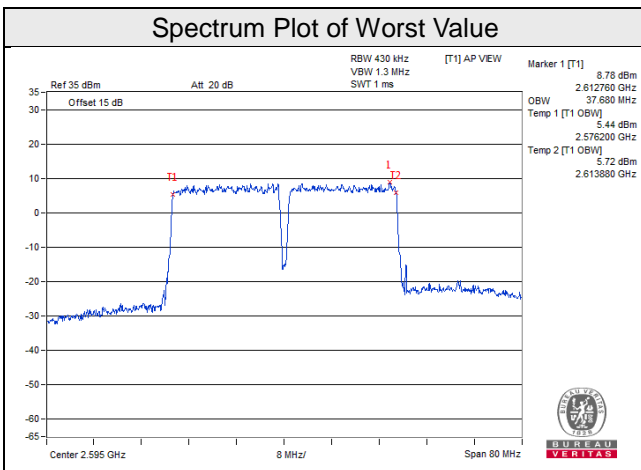
| LTE Band 38 | | | | | | | | | |
|-------------------------|-----------------|--------------------------|-------|-------|-------------------------|-----------------|--------------------------|-------|-------|
| Channel Bandwidth 5MHz | | | | | Channel Bandwidth 10MHz | | | | |
| Channel | Frequency (MHz) | Occupied Bandwidth (MHz) | | | Channel | Frequency (MHz) | Occupied Bandwidth (MHz) | | |
| | | QPSK | 16QAM | 64QAM | | | QPSK | 16QAM | 64QAM |
| 37775 | 2572.5 | 4.48 | 4.50 | 4.49 | 37800 | 2575 | 8.96 | 9.00 | 8.98 |
| 38000 | 2595 | 4.49 | 4.51 | 4.49 | 38000 | 2595 | 8.96 | 8.98 | 9.00 |
| 38225 | 2617.5 | 4.49 | 4.51 | 4.50 | 38200 | 2615 | 8.96 | 9.00 | 8.98 |
| Channel Bandwidth 15MHz | | | | | Channel Bandwidth 20MHz | | | | |
| Channel | Frequency (MHz) | Occupied Bandwidth (MHz) | | | Channel | Frequency (MHz) | Occupied Bandwidth (MHz) | | |
| | | QPSK | 16QAM | 64QAM | | | QPSK | 16QAM | 64QAM |
| 37825 | 2577.5 | 13.47 | 13.44 | 13.47 | 37850 | 2580 | 17.96 | 17.92 | 17.96 |
| 38000 | 2595 | 13.47 | 13.41 | 13.50 | 38000 | 2595 | 17.96 | 17.92 | 17.96 |
| 38175 | 2612.5 | 13.44 | 13.41 | 13.47 | 38150 | 2610 | 17.96 | 17.92 | 17.92 |



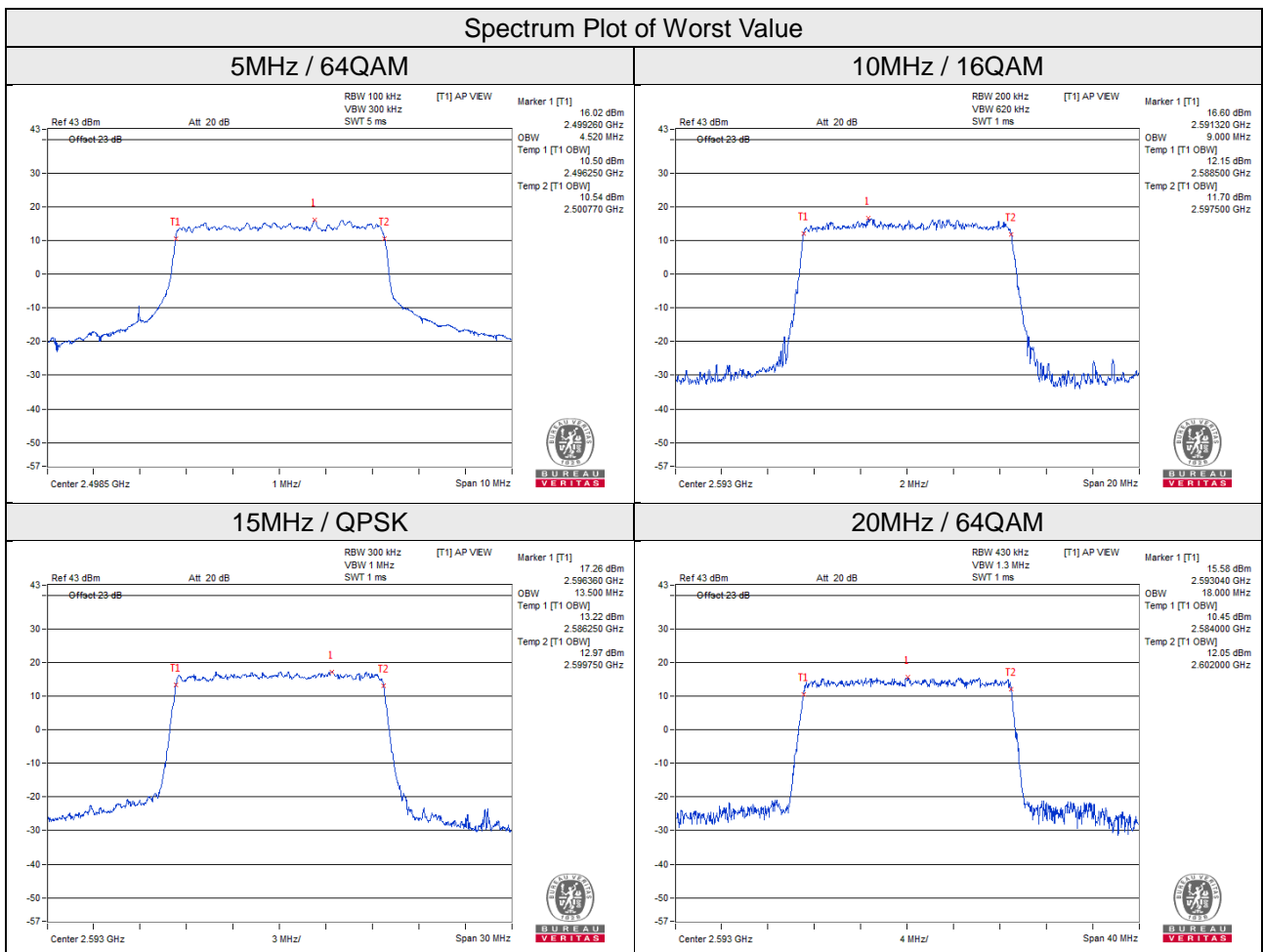
| LTE CA_38C (15+15MHz) | | |
|-----------------------|-------------|--------------------------|
| Channel | FREQ. (MHz) | Occupied Bandwidth (MHz) |
| | | QPSK |
| 38000+38150 | 2595+2610 | 28.32 |



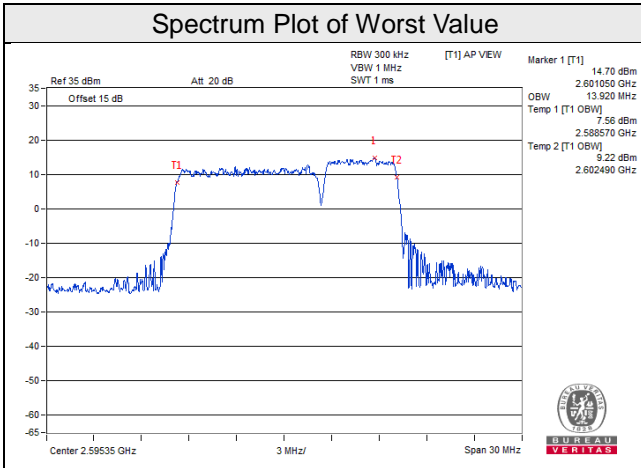
| LTE CA_38C(20+20MHz) | | |
|----------------------|-------------|--------------------------|
| Channel | FREQ. (MHz) | Occupied Bandwidth (MHz) |
| | | QPSK |
| 37952+38150 | 2590.2+2610 | 37.68 |



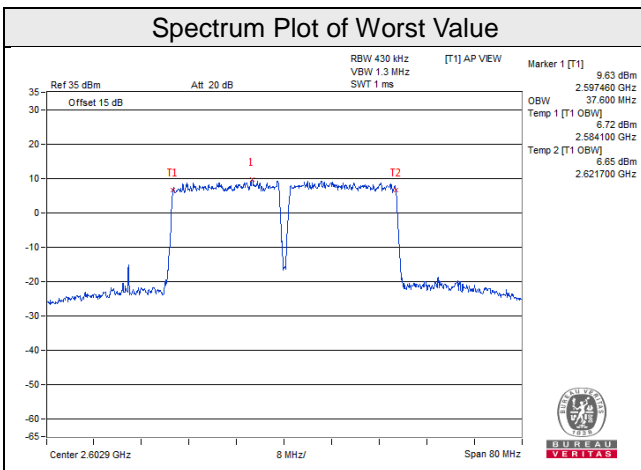
| LTE Band 41 | | | | | | | | | |
|-------------------------|-----------------|--------------------------|-------|-------|-------------------------|-----------------|--------------------------|-------|-------|
| Channel Bandwidth 5MHz | | | | | Channel Bandwidth 10MHz | | | | |
| Channel | Frequency (MHz) | Occupied Bandwidth (MHz) | | | Channel | Frequency (MHz) | Occupied Bandwidth (MHz) | | |
| | | QPSK | 16QAM | 64QAM | | | QPSK | 16QAM | 64QAM |
| 39675 | 2498.5 | 4.49 | 4.51 | 4.52 | 39700 | 2501 | 8.94 | 8.98 | 8.96 |
| 40620 | 2593 | 4.49 | 4.49 | 4.51 | 50620 | 2593 | 8.96 | 9.00 | 9.00 |
| 41565 | 2687.5 | 4.49 | 4.50 | 4.51 | 41540 | 2685 | 8.96 | 9.00 | 8.98 |
| Channel Bandwidth 15MHz | | | | | Channel Bandwidth 20MHz | | | | |
| Channel | Frequency (MHz) | Occupied Bandwidth (MHz) | | | Channel | Frequency (MHz) | Occupied Bandwidth (MHz) | | |
| | | QPSK | 16QAM | 64QAM | | | QPSK | 16QAM | 64QAM |
| 39725 | 2503.5 | 13.47 | 13.44 | 13.44 | 39750 | 2506 | 17.96 | 17.88 | 17.92 |
| 40620 | 2593 | 13.50 | 13.44 | 13.50 | 40620 | 2593 | 17.96 | 17.92 | 18.00 |
| 41515 | 2682.5 | 13.47 | 13.44 | 13.47 | 41490 | 2680 | 17.92 | 17.88 | 17.88 |



| LTE CA_41C (10+5MHz) | | |
|----------------------|-------------|--------------------------|
| Channel | FREQ. (MHz) | Occupied Bandwidth (MHz) |
| | | QPSK |
| 40620+40692 | 2593+2600.2 | 13.92 |



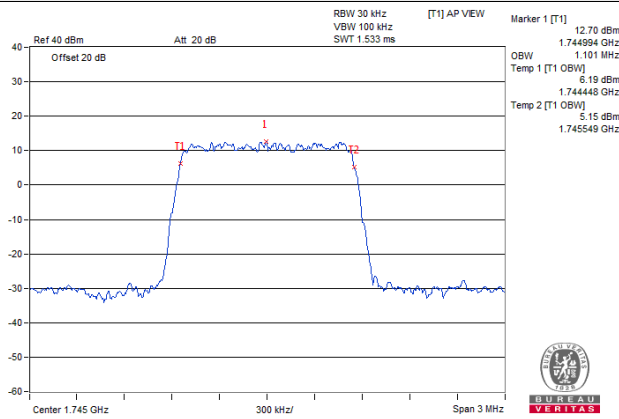
| TE CA_41C (20+20MHz) | | |
|----------------------|-------------|--------------------------|
| Channel | FREQ. (MHz) | Occupied Bandwidth (MHz) |
| | | QPSK |
| 40620+40818 | 2593+2612.8 | 37.60 |



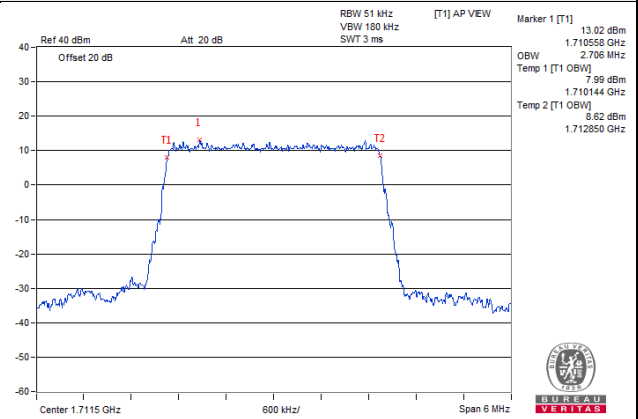
| LTE Band 66 | | | | | | | | | |
|--------------------------|-----------------|--------------------------|-------|-------|-------------------------|-----------------|--------------------------|-------|-------|
| Channel Bandwidth 1.4MHz | | | | | Channel Bandwidth 3MHz | | | | |
| Channel | Frequency (MHz) | Occupied Bandwidth (MHz) | | | Channel | Frequency (MHz) | Occupied Bandwidth (MHz) | | |
| | | QPSK | 16QAM | 64QAM | | | QPSK | 16QAM | 64QAM |
| 131979 | 1710.7 | 1.08 | 1.09 | 1.08 | 131987 | 1711.5 | 2.70 | 2.68 | 2.69 |
| 132322 | 1745 | 1.09 | 1.10 | 1.09 | 132322 | 1745 | 2.70 | 2.68 | 2.69 |
| 132665 | 1779.3 | 1.08 | 1.09 | 1.09 | 132657 | 1778.5 | 2.70 | 2.68 | 2.68 |
| Channel Bandwidth 5MHz | | | | | Channel Bandwidth 10MHz | | | | |
| Channel | Frequency (MHz) | Occupied Bandwidth (MHz) | | | Channel | Frequency (MHz) | Occupied Bandwidth (MHz) | | |
| | | QPSK | 16QAM | 64QAM | | | QPSK | 16QAM | 64QAM |
| 131997 | 1712.5 | 4.49 | 4.50 | 4.50 | 132022 | 1715 | 8.98 | 9.00 | 9.00 |
| 132322 | 1745 | 4.50 | 4.50 | 4.51 | 132322 | 1745 | 9.00 | 9.00 | 9.00 |
| 132647 | 1777.5 | 4.50 | 4.51 | 4.50 | 132622 | 1775 | 9.02 | 8.98 | 9.00 |
| Channel Bandwidth 15MHz | | | | | Channel Bandwidth 20MHz | | | | |
| Channel | Frequency (MHz) | Occupied Bandwidth (MHz) | | | Channel | Frequency (MHz) | Occupied Bandwidth (MHz) | | |
| | | QPSK | 16QAM | 64QAM | | | QPSK | 16QAM | 64QAM |
| 132047 | 1717.5 | 13.47 | 13.44 | 13.47 | 132072 | 1720 | 17.96 | 17.88 | 17.88 |
| 132322 | 1745 | 13.50 | 13.47 | 13.50 | 132322 | 1745 | 18.00 | 17.92 | 18.00 |
| 132597 | 1722.5 | 13.47 | 13.47 | 13.47 | 132572 | 1770 | 17.96 | 17.88 | 17.96 |

Spectrum Plot of Worst Value

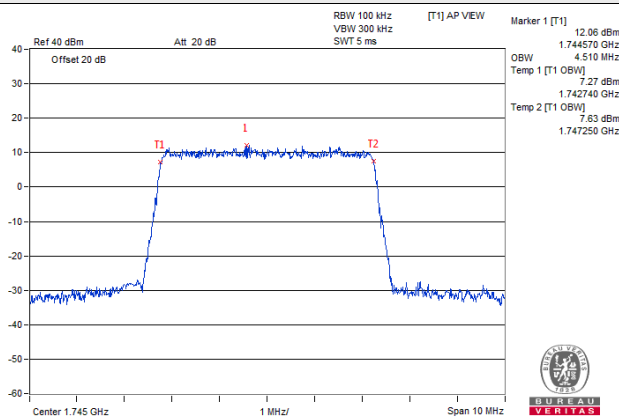
1.4MHz / 16QAM



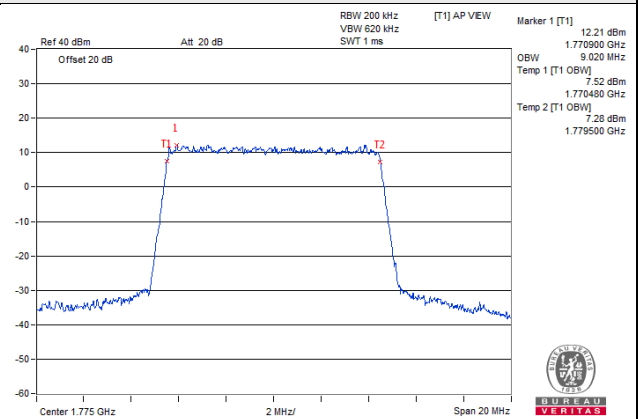
3MHz / QPSK



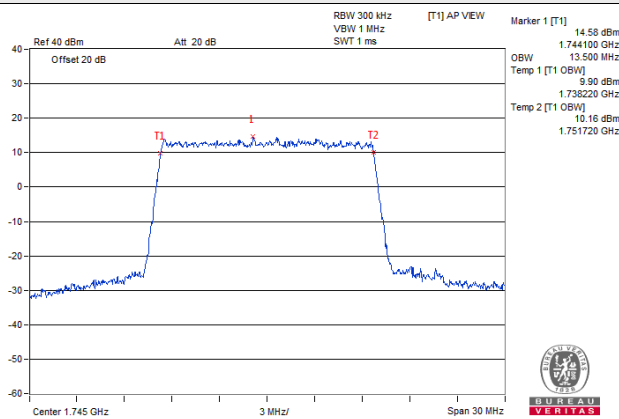
5MHz / 64QAM



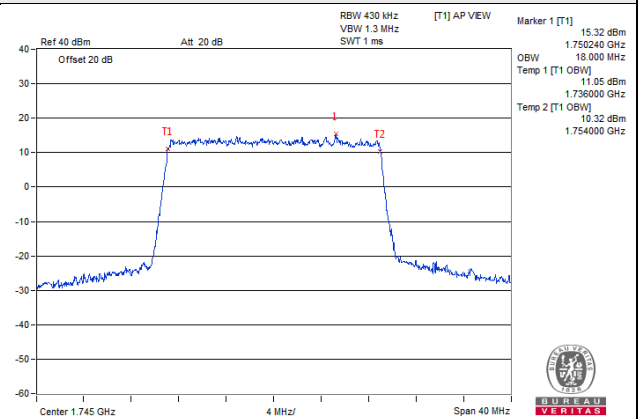
10MHz / QPSK



15MHz / QPSK



20MHz / QPSK



4.5 Channel Edge Measurement

4.5.1 Limits of Channel Edge Measurement

According to FCC 27.53(a)(4) For mobile and portable stations operating in the 2305-2315 MHz and 2350-2360 MHz bands: (i) By a factor of not less than: $43 + 10 \log (P)$ dB on all frequencies between 2305 and 2320 MHz and on all frequencies between 2345 and 2360 MHz that are outside the licensed band(s) of operation, not less than $55 + 10 \log (P)$ dB on all frequencies between 2320 and 2324 MHz and on all frequencies between 2341 and 2345 MHz, not less than $61 + 10 \log (P)$ dB on all frequencies between 2324 and 2328 MHz and on all frequencies between 2337 and 2341 MHz, and not less than $67 + 10 \log (P)$ dB on all frequencies between 2328 and 2337 MHz; (ii) By a factor of not less than $43 + 10 \log (P)$ dB on all frequencies between 2300 and 2305 MHz, $55 + 10 \log (P)$ dB on all frequencies between 2296 and 2300 MHz, $61 + 10 \log (P)$ dB on all frequencies between 2292 and 2296 MHz, $67 + 10 \log (P)$ dB on all frequencies between 2288 and 2292 MHz, and $70 + 10 \log (P)$ dB below 2288 MHz; (iii) By a factor of not less than $43 + 10 \log (P)$ dB on all frequencies between 2360 and 2365 MHz, and not less than $70 + 10 \log (P)$ dB above 2365 MHz.

According to FCC 27.53 (c) For operations in the 746-758 MHz band and the 776-788 MHz band, the power of any emission outside the 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, in accordance with the following:

- (1) On any frequency outside the 746-758 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log (P)$ dB;
- (2) On any frequency outside the 776-788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log (P)$ dB;
- (3) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than $76 + 10 \log (P)$ dB in a 6.25 kHz band segment, for base and fixed stations;
- (4) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than $65 + 10 \log (P)$ dB in a 6.25 kHz band segment, for mobile and portable stations;
- (5) Compliance with the provisions of paragraphs (c)(1) and (c)(2) of this section is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 30 kHz may be employed;
- (6) Compliance with the provisions of paragraphs (c)(3) and (c)(4) of this section is based on the use of measurement instrumentation such that the reading taken with any resolution bandwidth setting should be adjusted to indicate spectral energy in a 6.25 kHz segment.

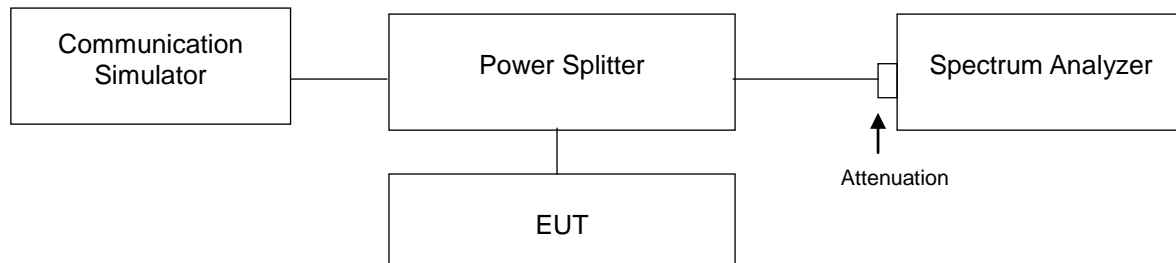
According to FCC 27.53(f) For operations in the 746–758 MHz, 775–788 MHz, and 805–806 MHz bands, emissions in the band 1559–1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth.

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. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

According to FCC 27.53(h) AWS emission limits— General protection levels. Except as otherwise specified below, for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 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 $43 + 10 \log_{10} (P)$ dB.

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

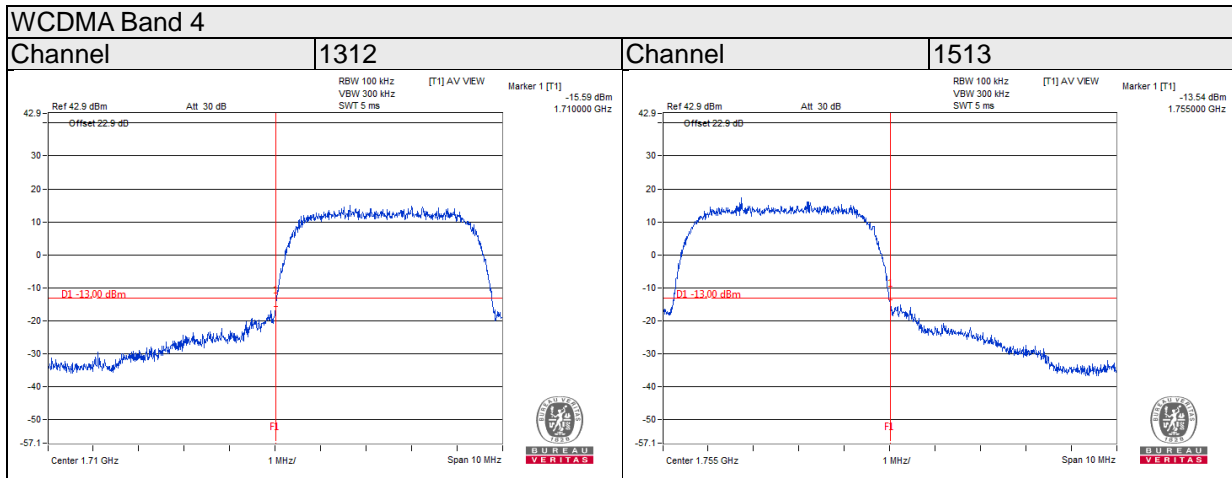
4.5.2 Test Setup



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 s RB of the spectrum is >1% emission bandwidth and VB of the spectrum is $\geq 3*RB$.
- c. Record the max trace plot into the test report.

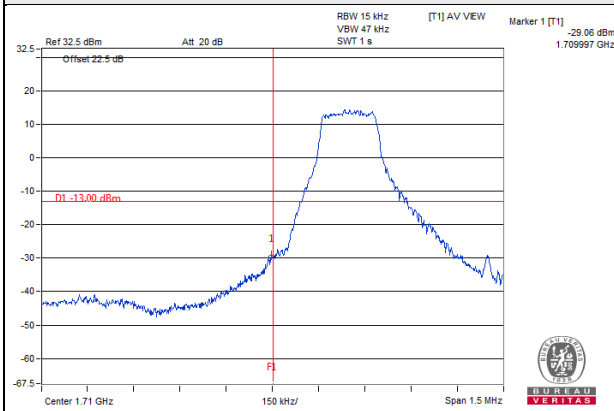
4.5.4 Test Results



LTE Band 4 Channel Band width: 1.4MHz

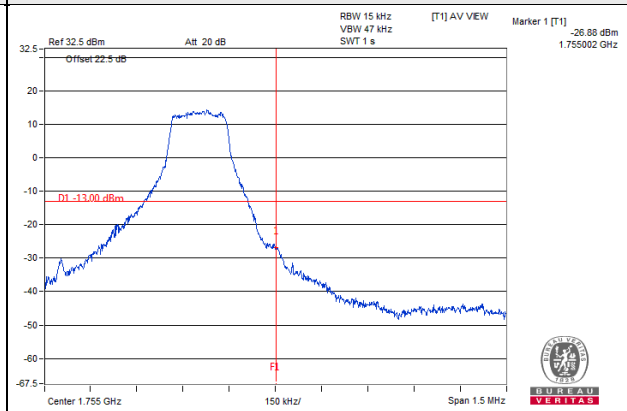
Channel 19957

1 RB

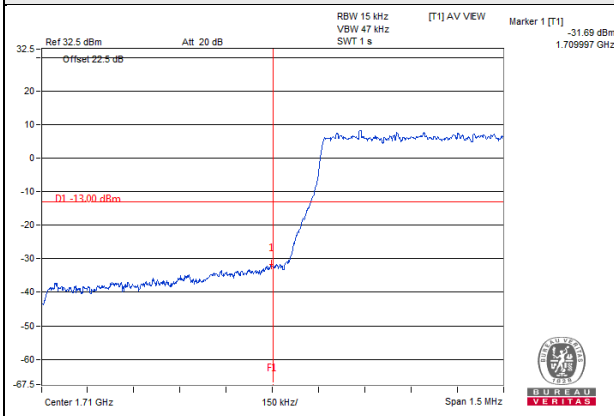


Channel 20393

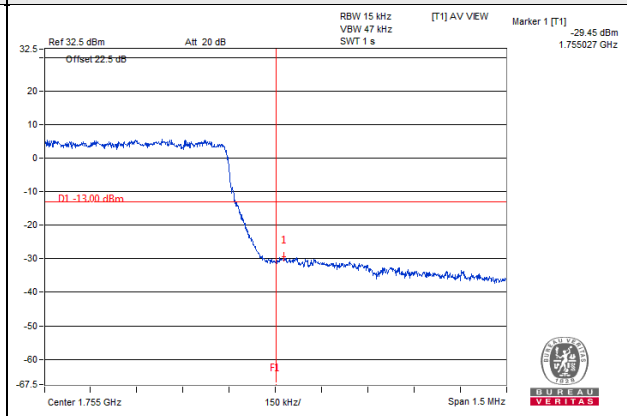
1 RB



6 RB



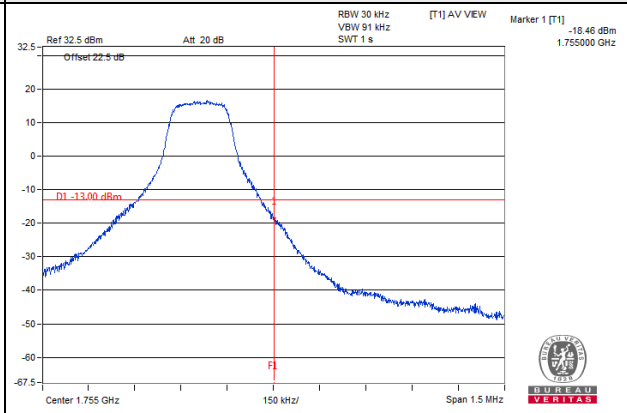
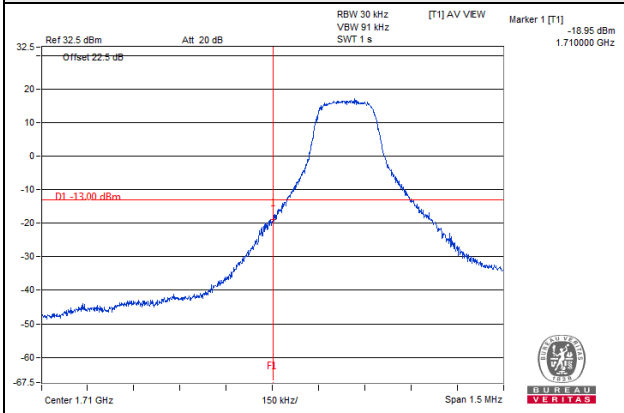
6 RB



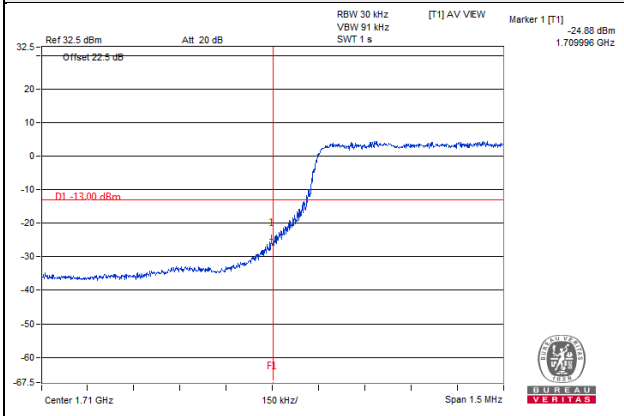
LTE Band 4 Channel Band width: 3MHz

Channel 19965 **Channel 20385**

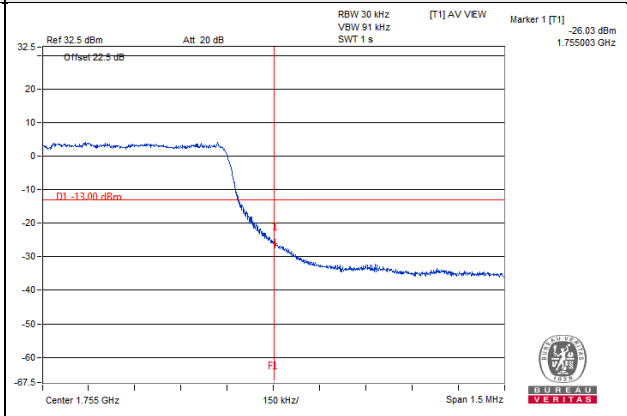
1 RB **1 RB**



15 RB



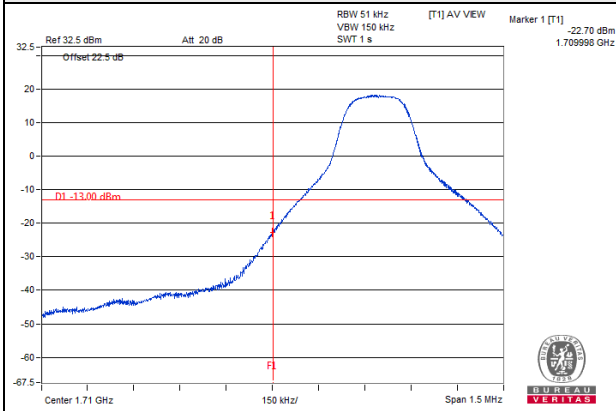
15 RB



LTE Band 4 Channel Band width: 5MHz

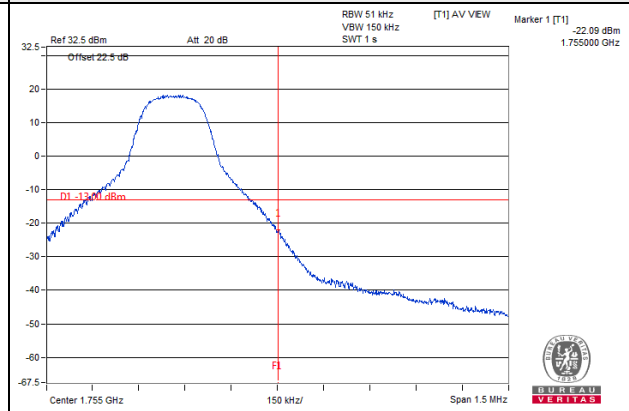
Channel 19975

1 RB

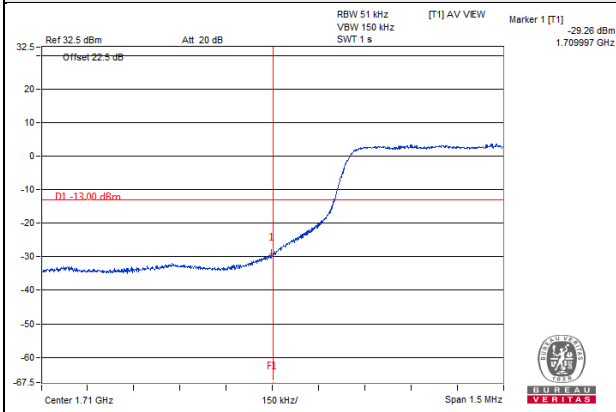


Channel 20375

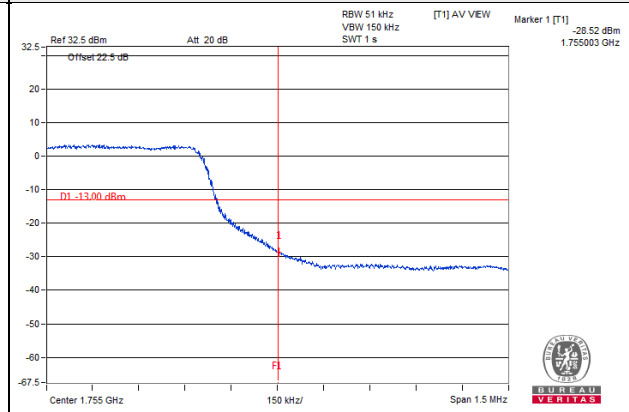
1 RB



25 RB



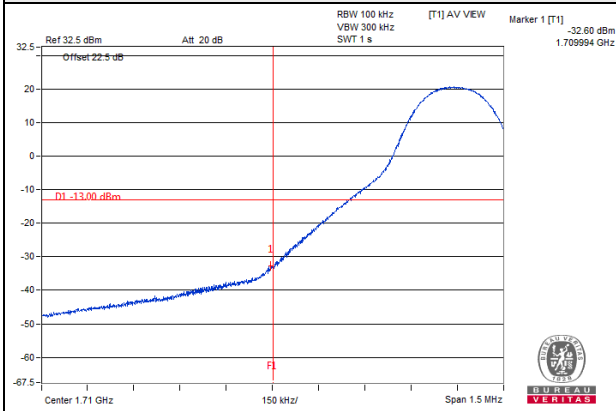
25 RB



LTE Band 4 Channel Band width: 10MHz

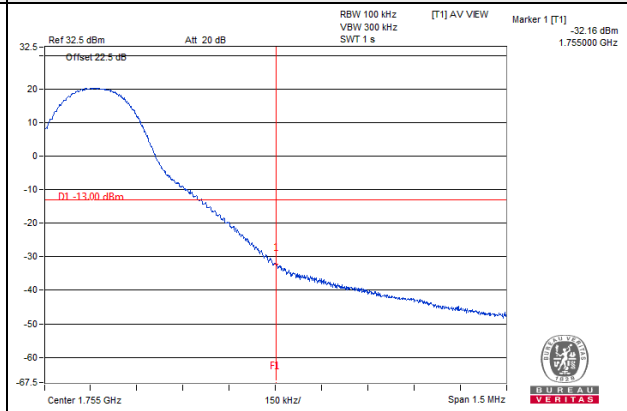
Channel 20000

1 RB

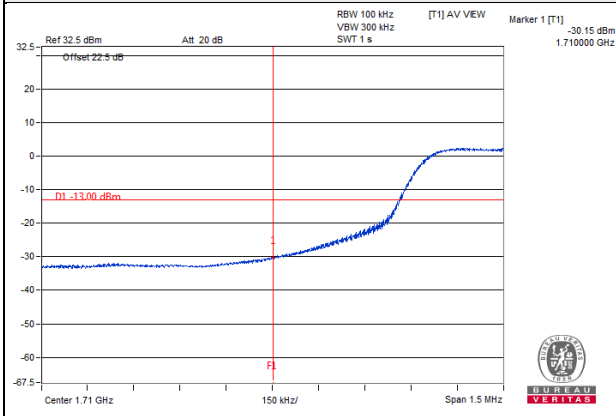


Channel 20350

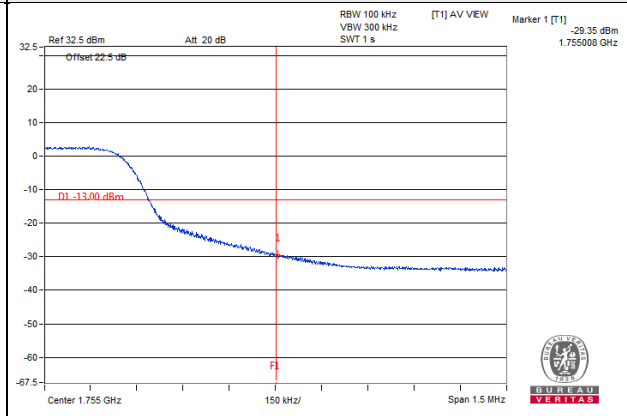
1 RB



50 RB



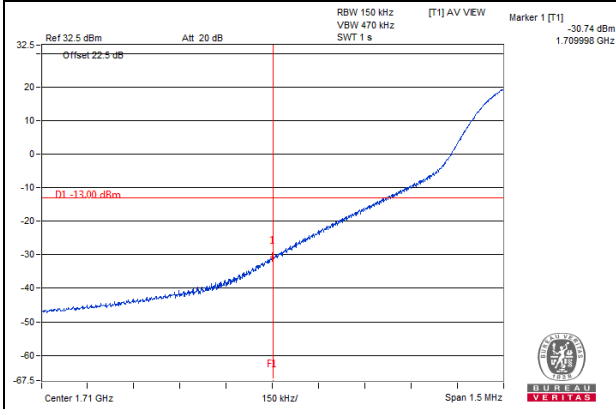
50 RB



LTE Band 4 Channel Band width: 15MHz

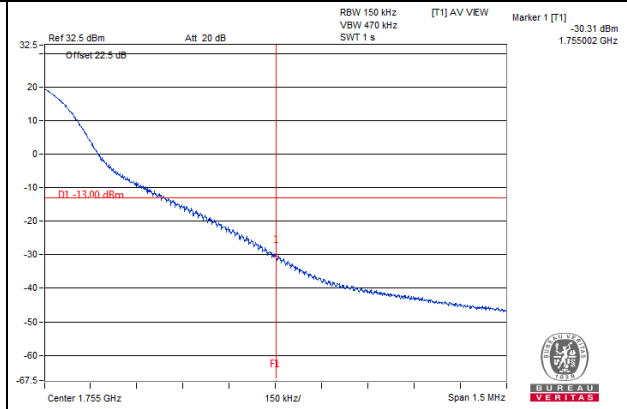
Channel 20025

1 RB

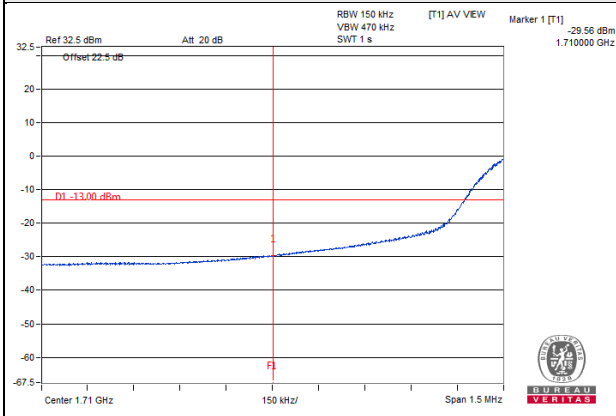


Channel 20325

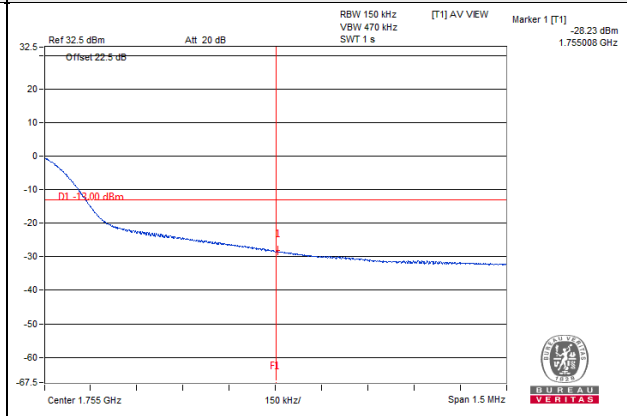
1 RB



75 RB



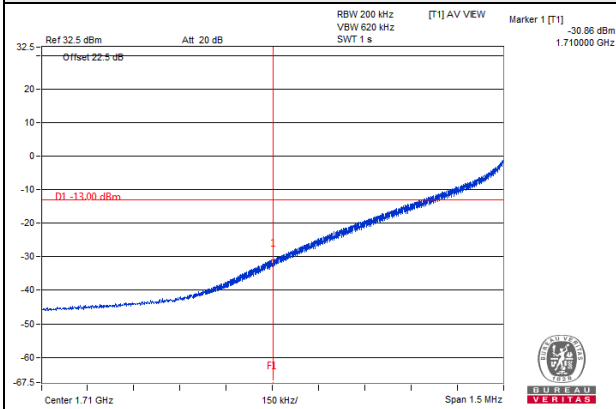
75 RB



LTE Band 4 Channel Band width: 20MHz

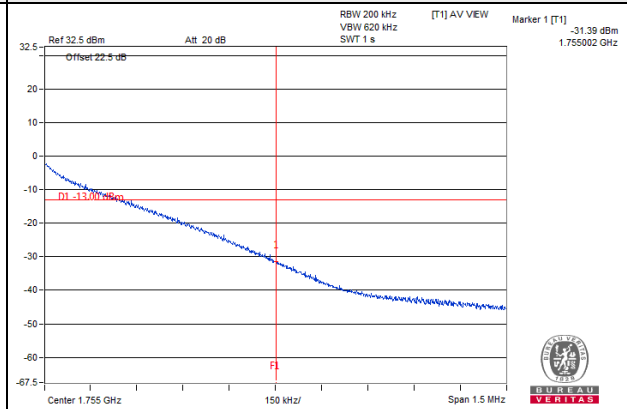
Channel 20050

1 RB

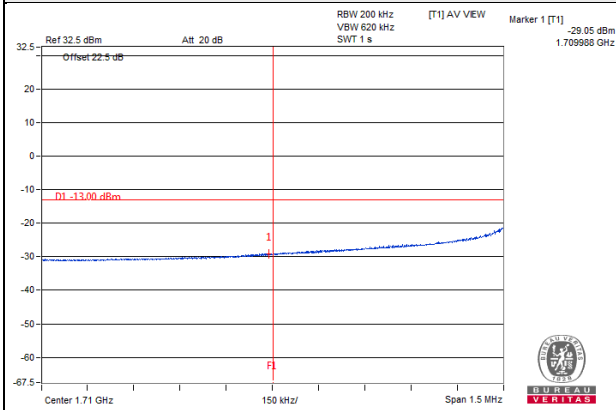


Channel 20300

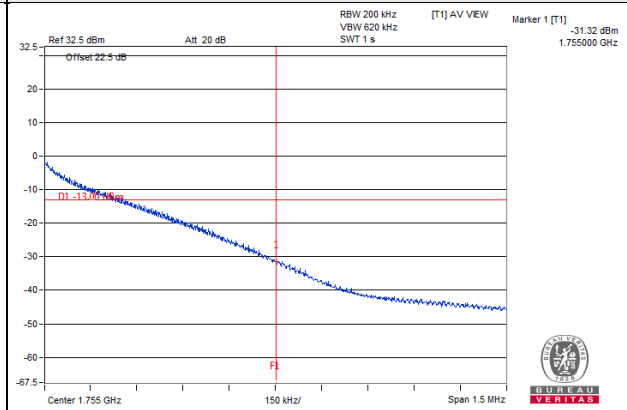
1 RB



100 RB



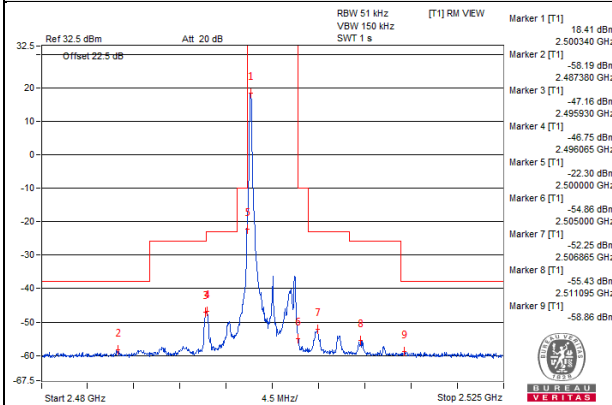
100 RB



LTE Band 7 Channel Band width: 5MHz

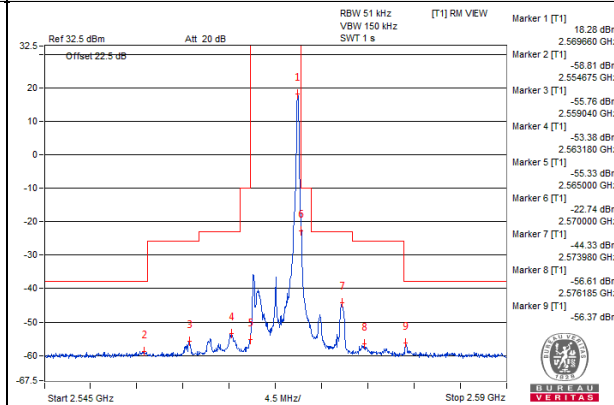
Channel 20775

1 RB

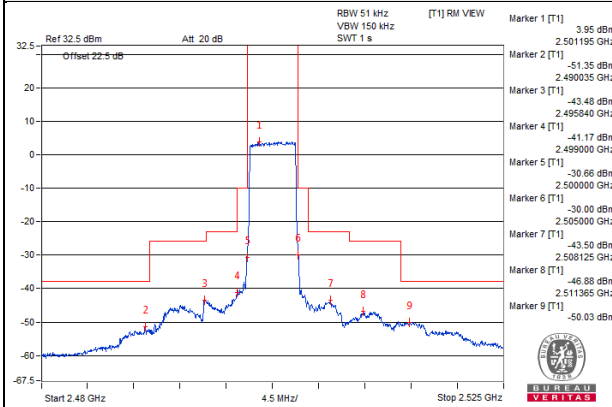


Channel 21425

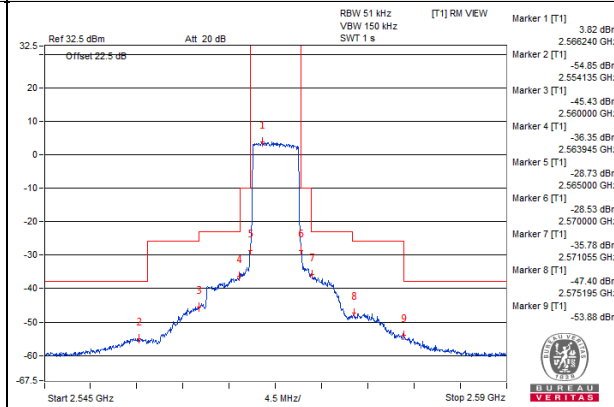
1 RB



25 RB



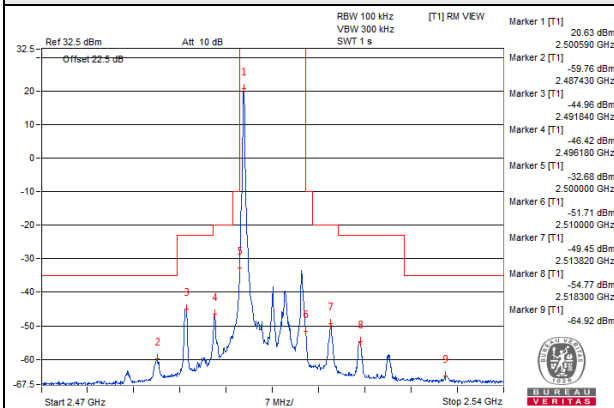
25 RB



LTE Band 7 Channel Band width: 10MHz

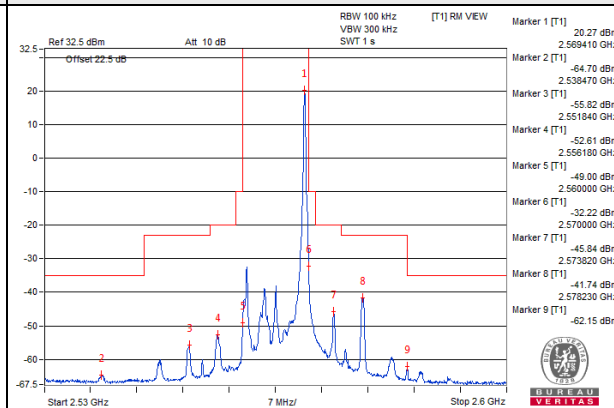
Channel 20800

1 RB

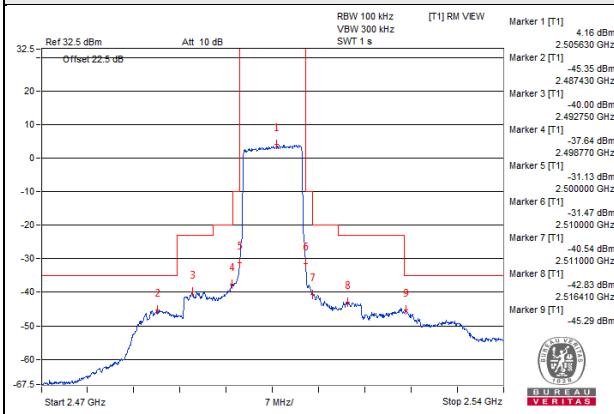


Channel 21400

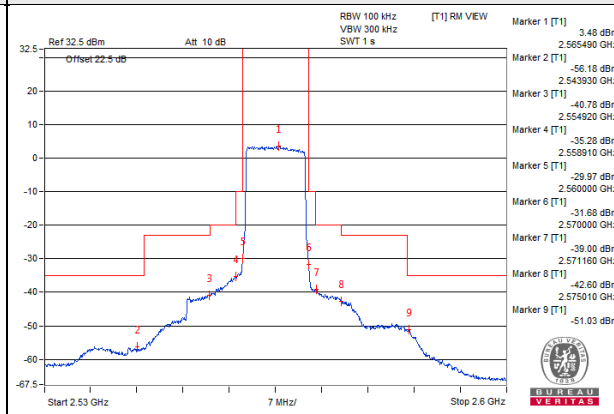
1 RB



50 RB



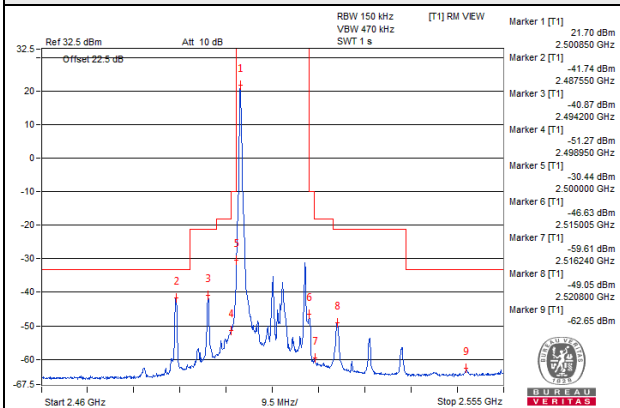
50 RB



LTE Band 7 Channel Band width: 15MHz

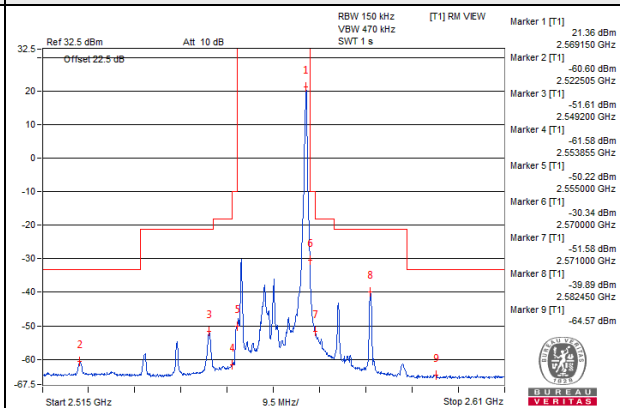
Channel 20825

1 RB

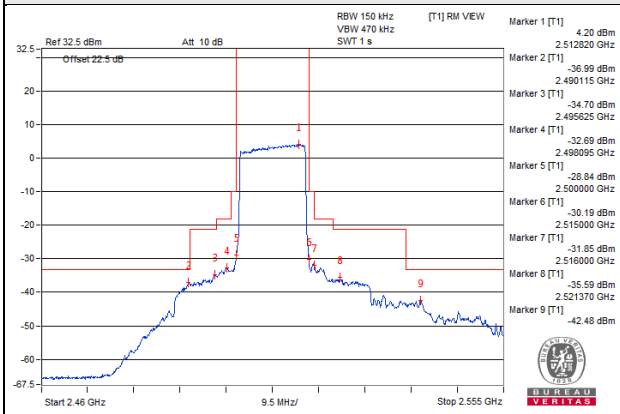


Channel 21375

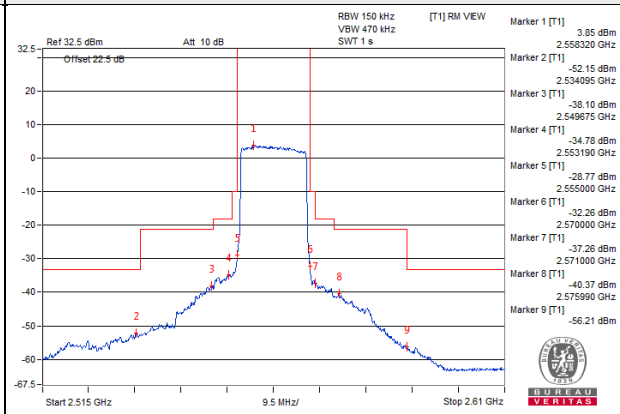
1 RB



75 RB



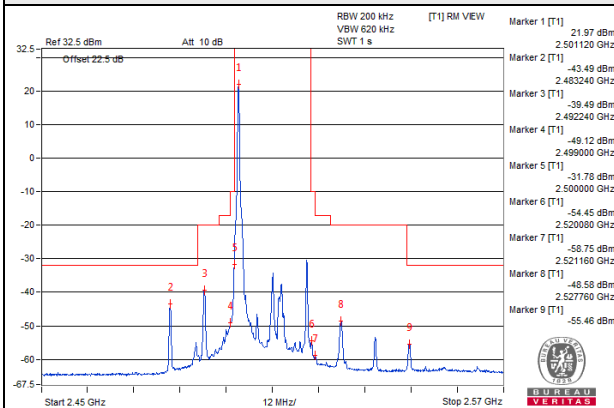
75 RB



LTE Band 7 Channel Band width: 20MHz

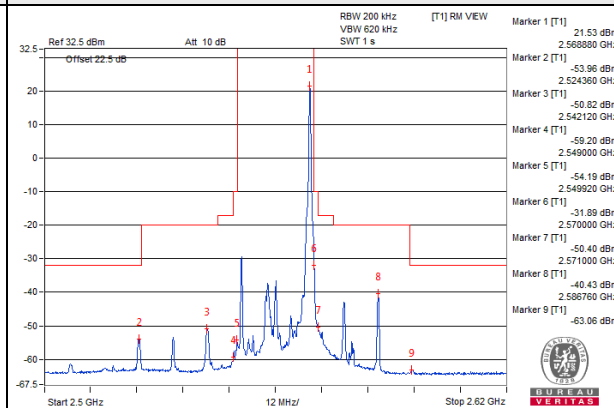
Channel 20850

1 RB

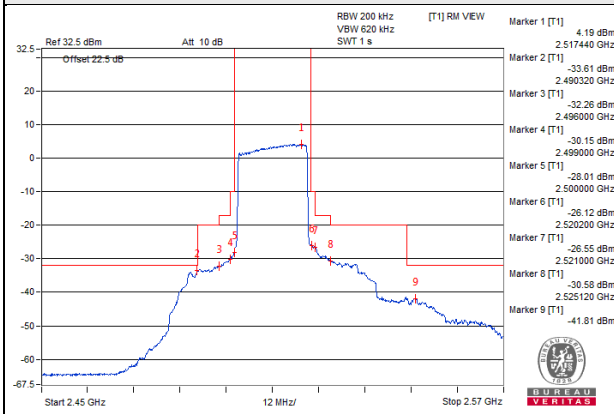


Channel 21350

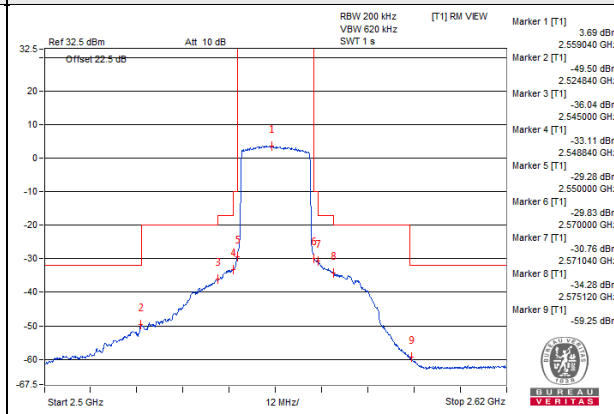
1 RB



100 RB

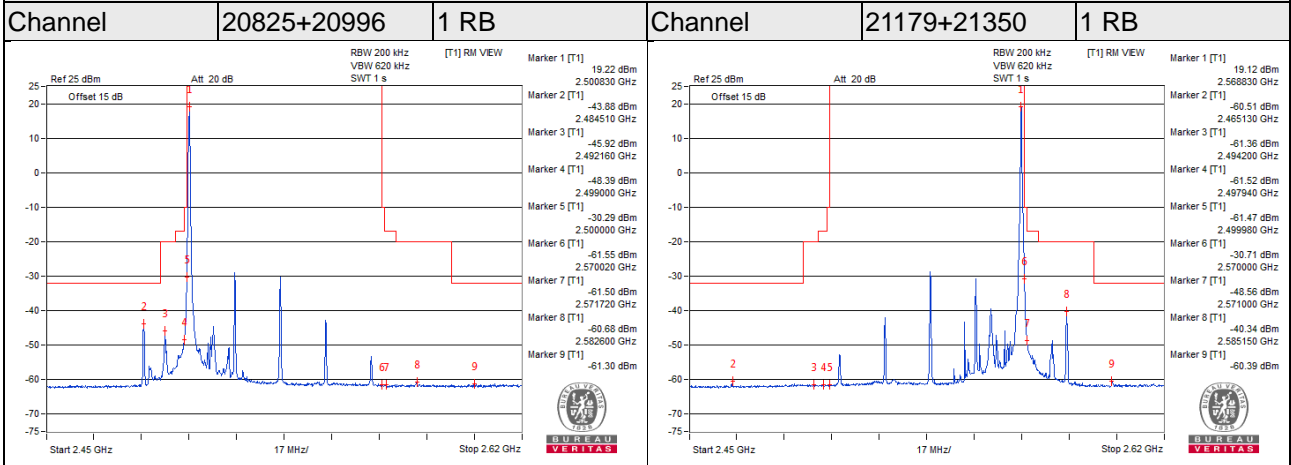


100 RB

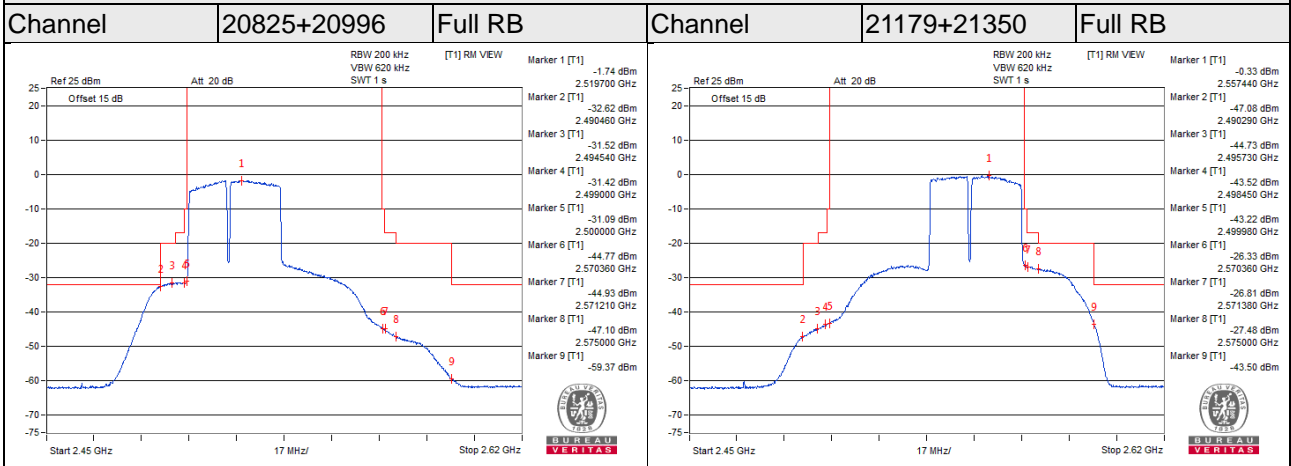


LTE CA_7C

Channel Bandwidth 15+20MHz



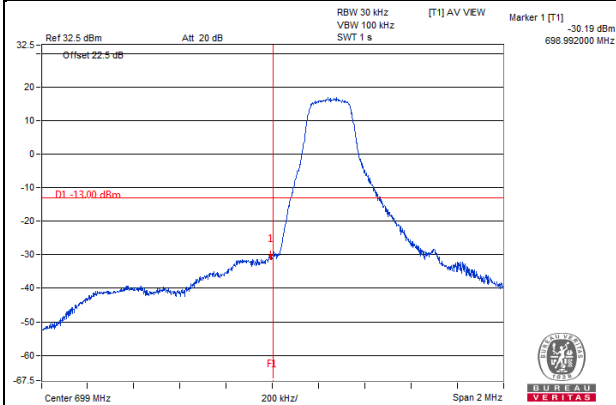
Channel Bandwidth 15+20MHz



LTE Band 12 Channel Band width: 1.4MHz

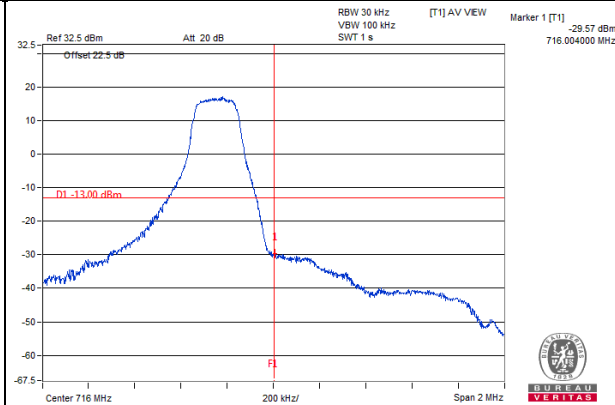
Channel 23017

1 RB

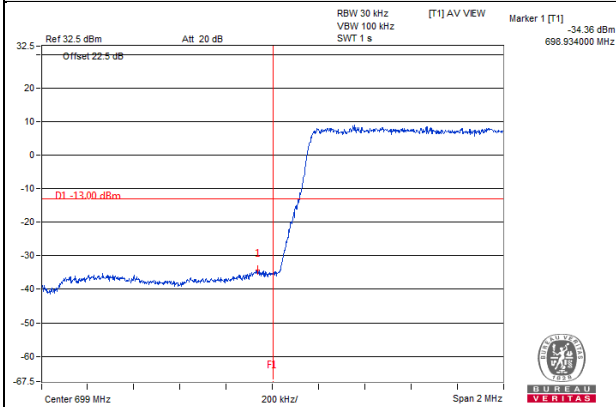


Channel 23173

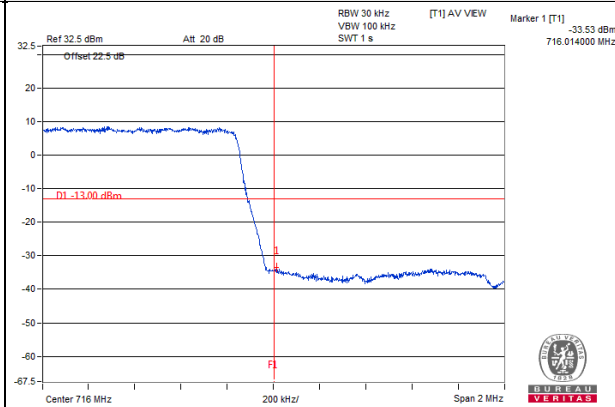
1 RB



6 RB



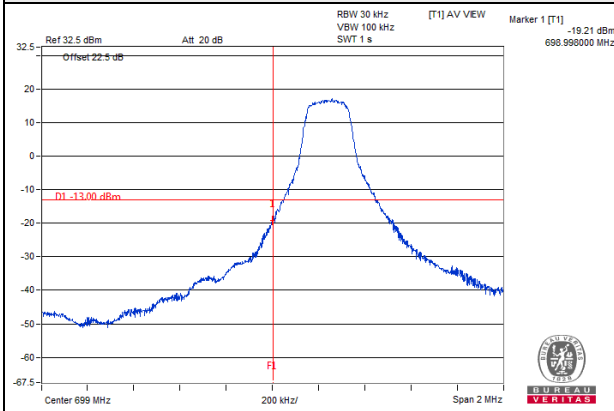
6 RB



LTE Band 12 Channel Band width: 3MHz

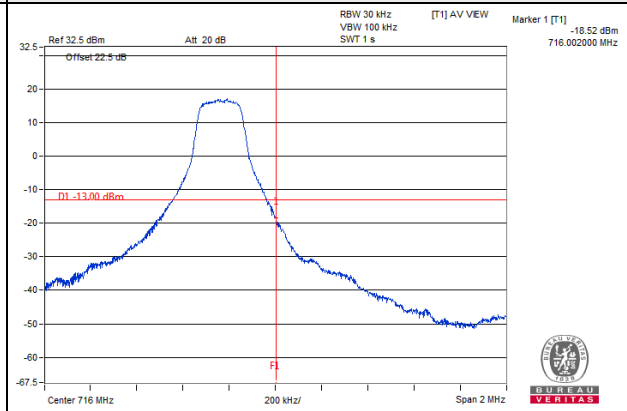
Channel 23025

1 RB

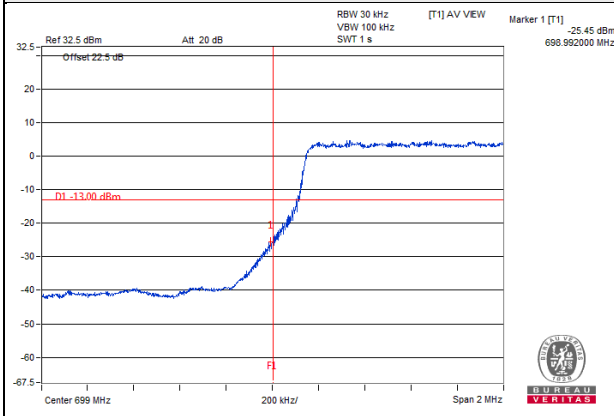


Channel 23165

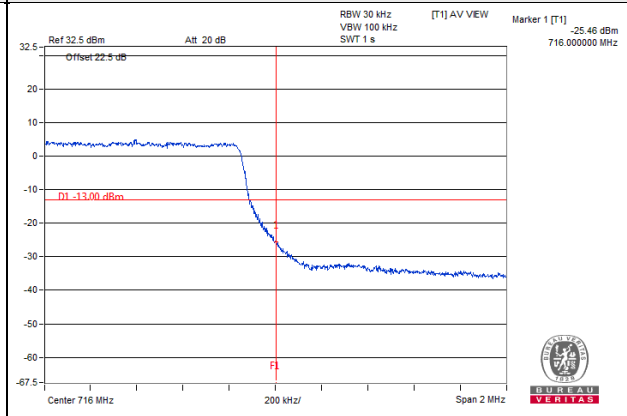
1 RB



15 RB



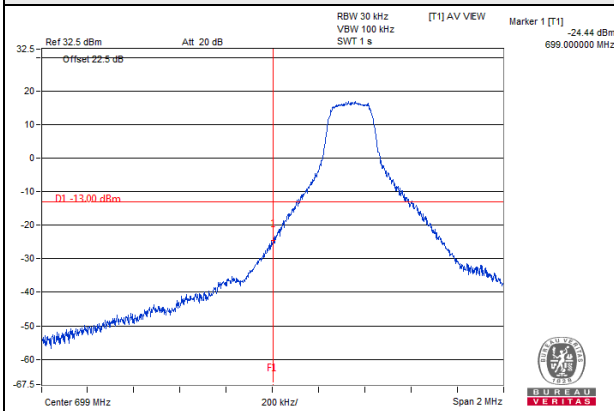
15 RB



LTE Band 12 Channel Band width: 5MHz

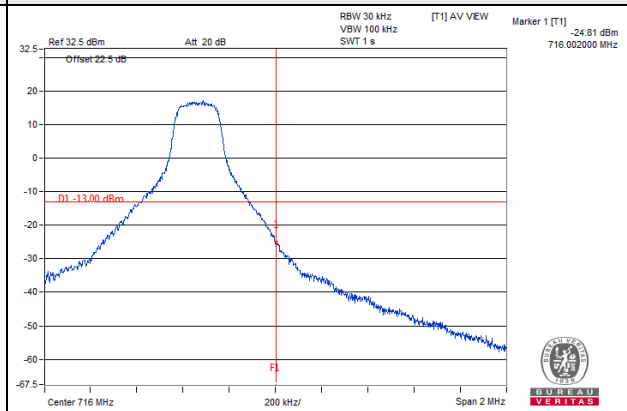
Channel 23035

1 RB

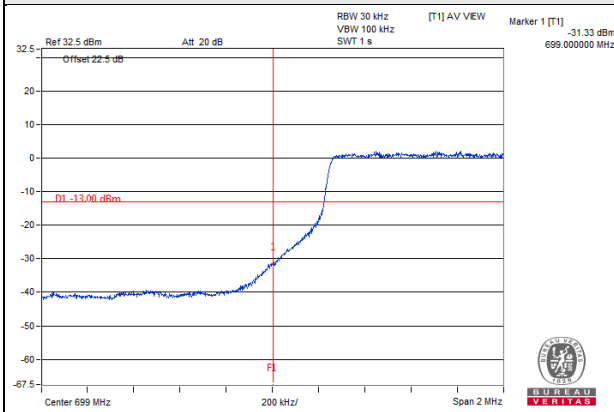


Channel 23155

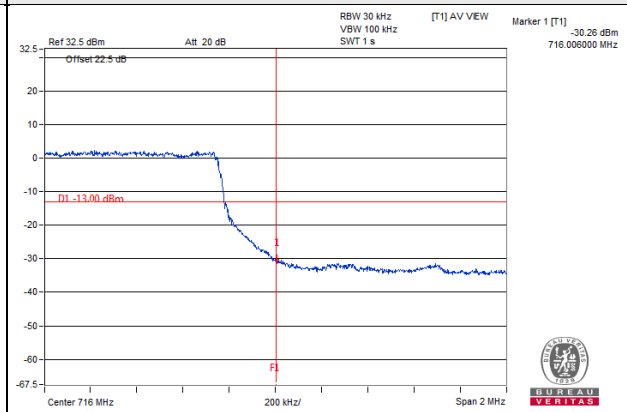
1 RB



25 RB



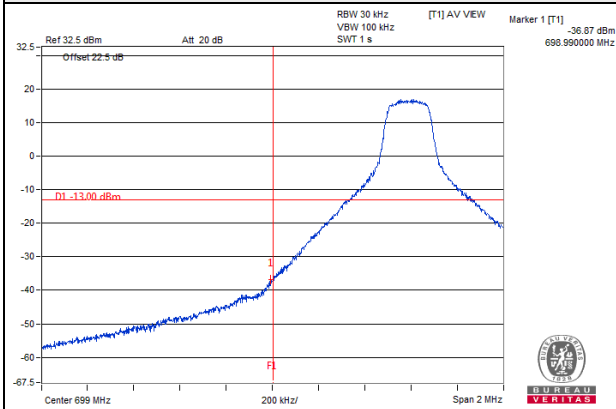
25 RB



LTE Band 12 Channel Band width: 10MHz

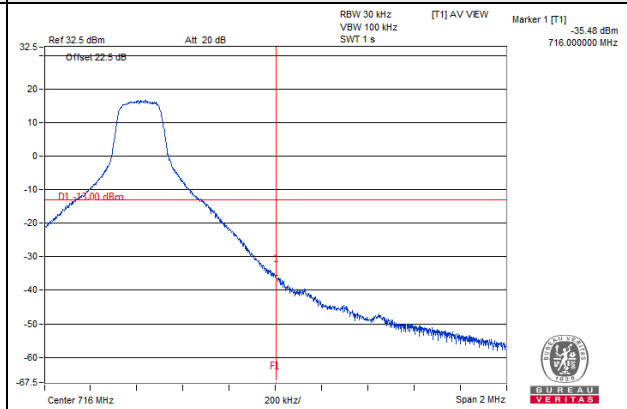
Channel 23060

1 RB

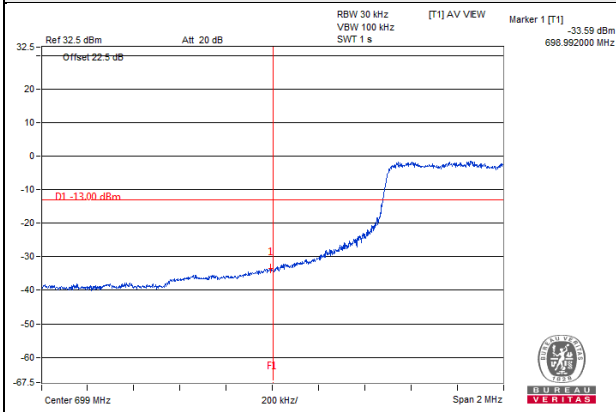


Channel 23130

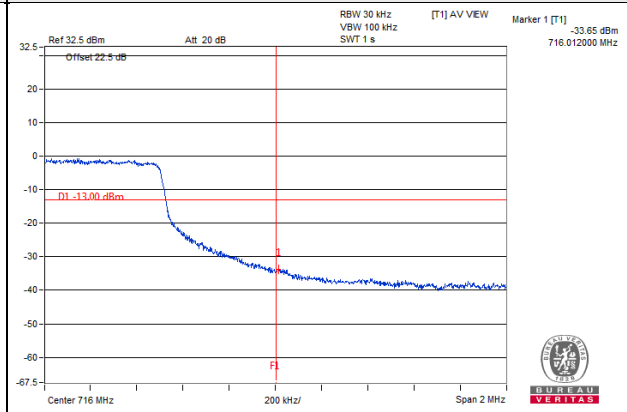
1 RB



50 RB

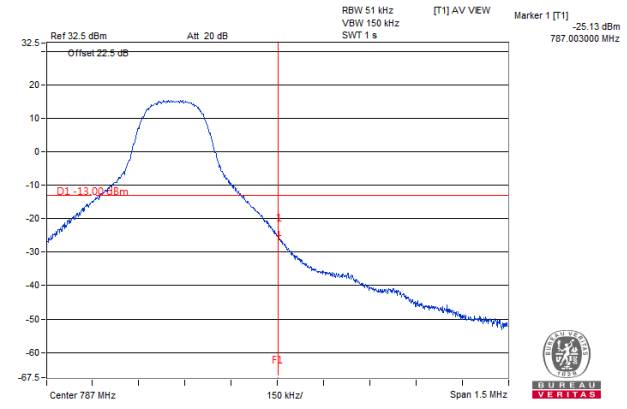
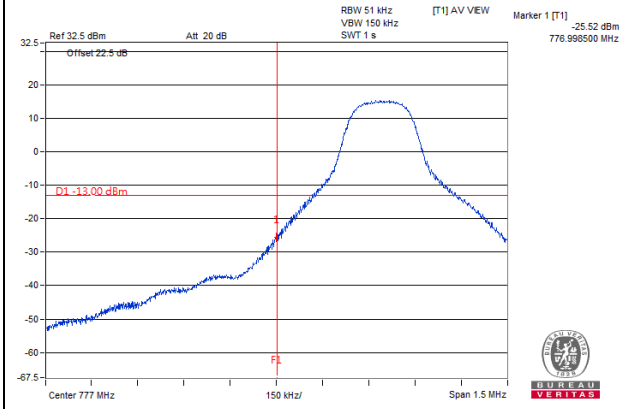


50 RB

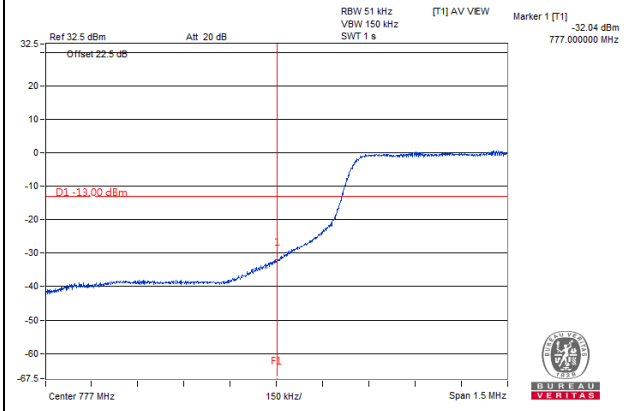


LTE Band 13 Channel Band width: 5MHz

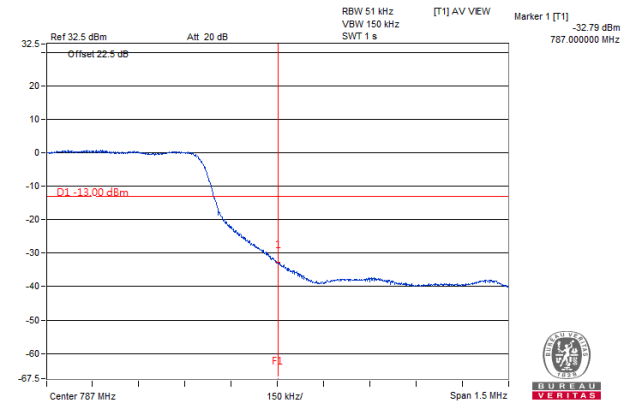
| | |
|---------------|---------------|
| Channel 23205 | Channel 23255 |
| 1 RB | 1 RB |



25 RB



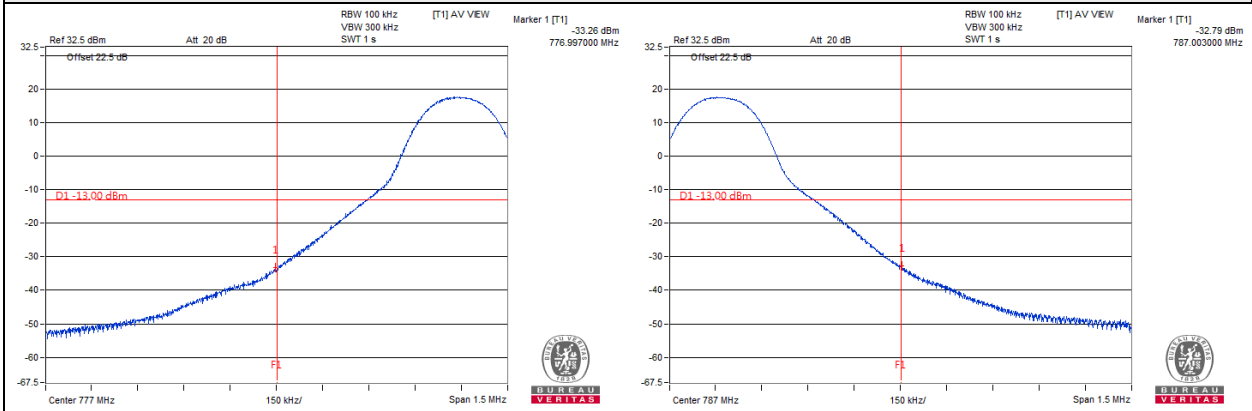
25 RB



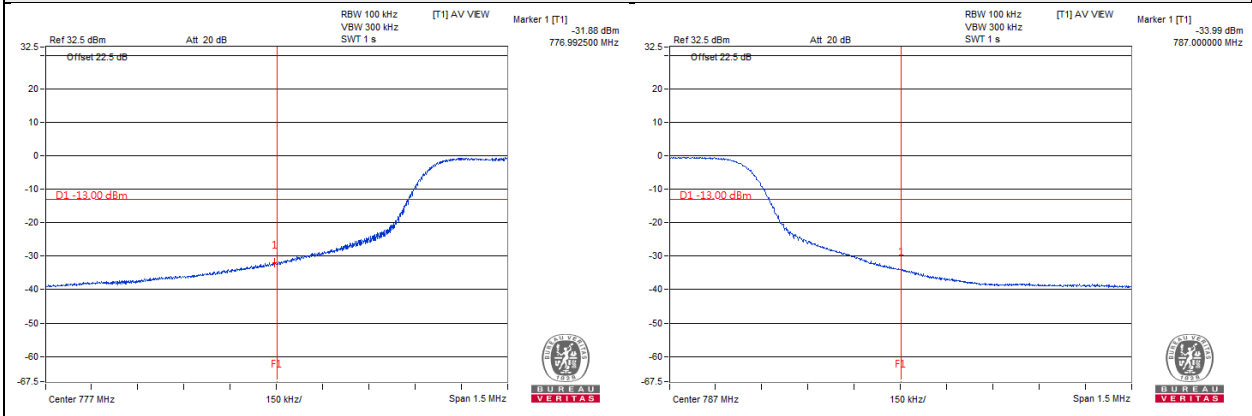
LTE Band 13 Channel Band width: 10MHz

Channel 23230

1 RB



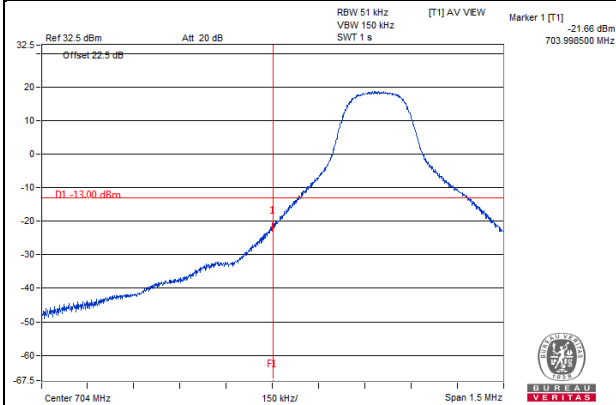
50 RB



LTE Band 17 Channel Band width: 5MHz

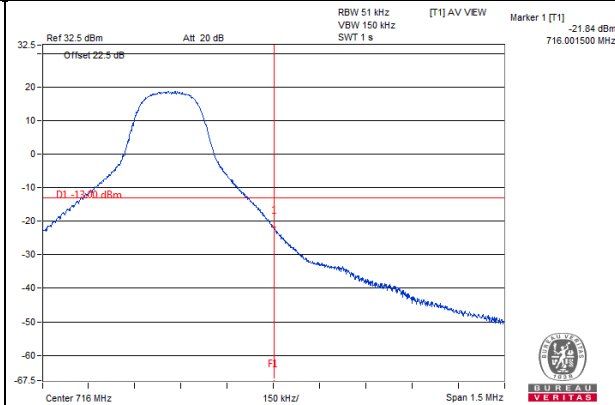
Channel 23755

1 RB

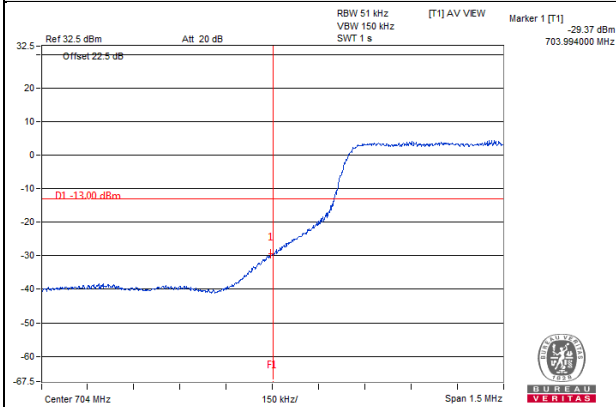


Channel 23825

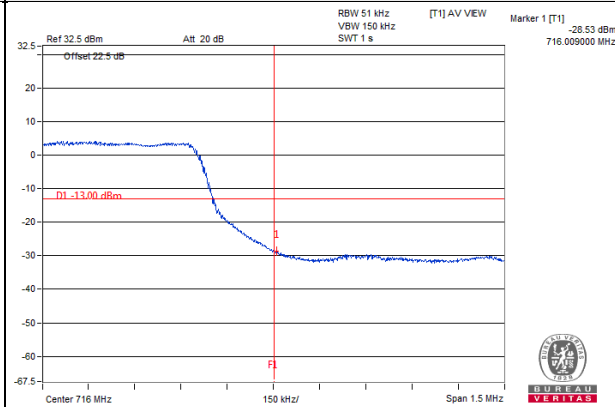
1 RB



25 RB



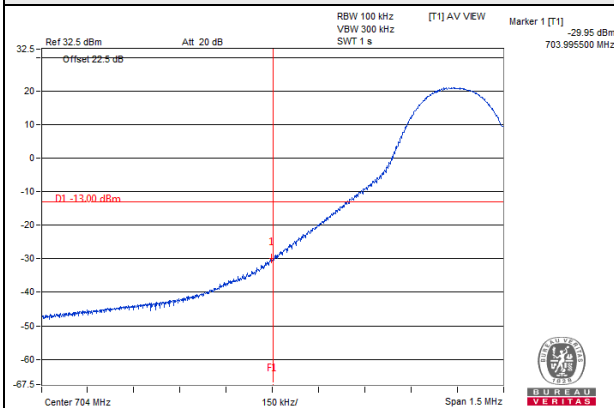
25 RB



LTE Band 17 Channel Band width: 10MHz

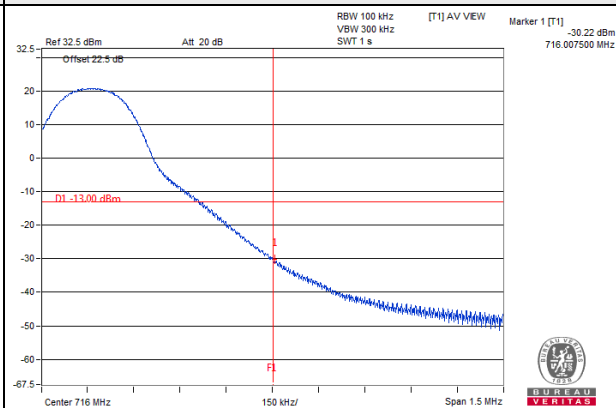
Channel 23780

1 RB

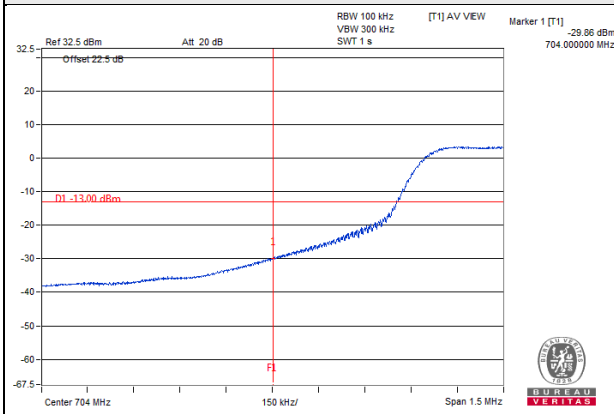


Channel 23800

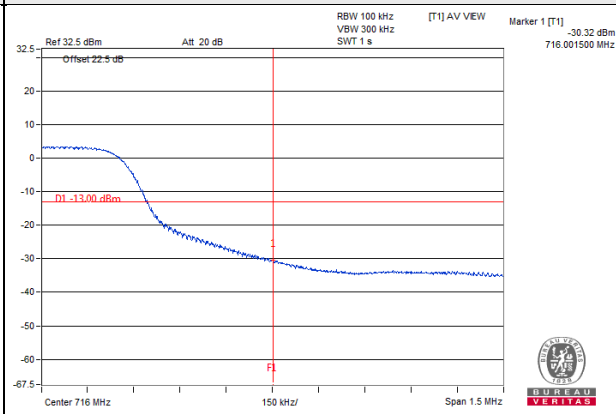
1 RB



50 RB



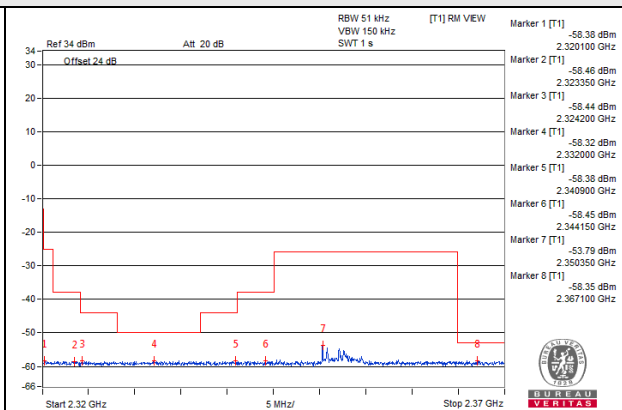
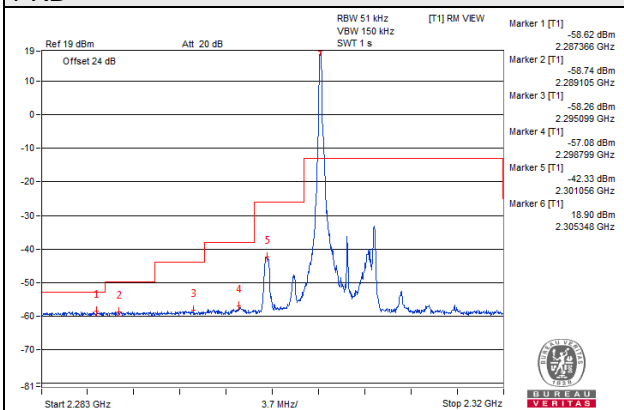
50 RB



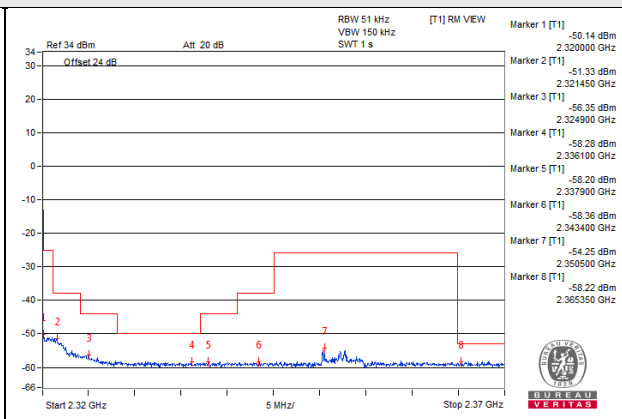
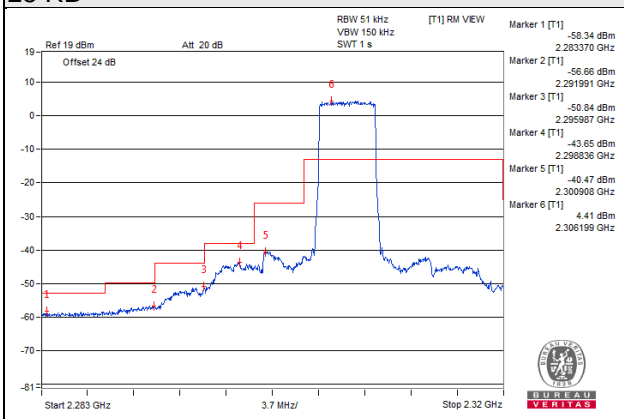
LTE Band 30 Channel Band width: 5MHz

Channel 27685

1 RB



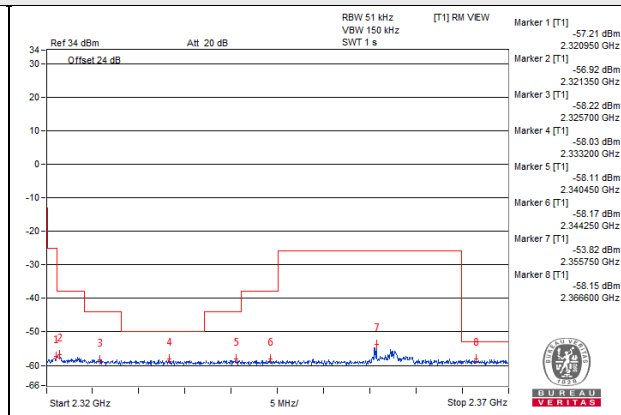
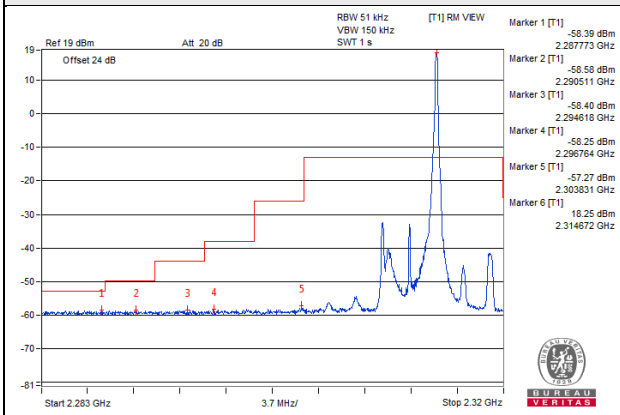
25 RB



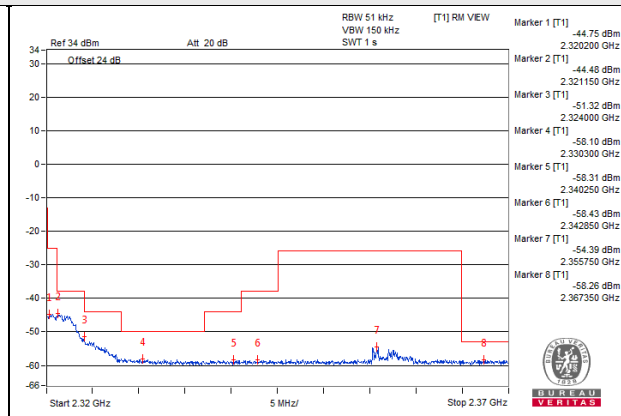
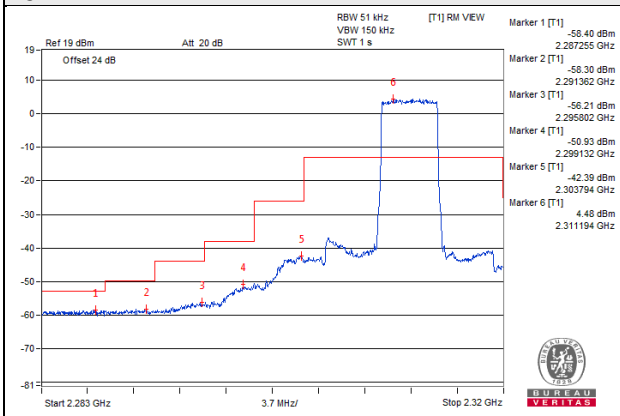
LTE Band 30 Channel Band width: 5MHz

Channel 27735

1 RB

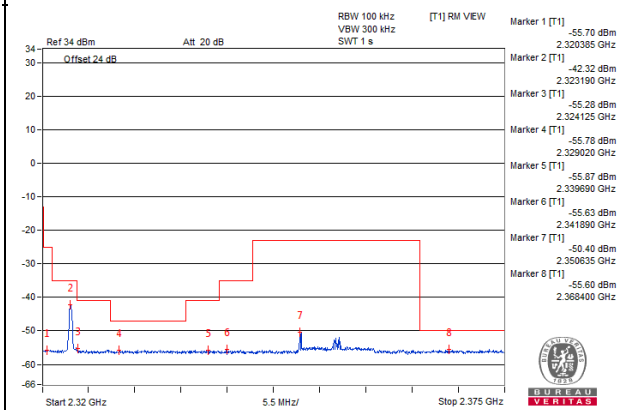
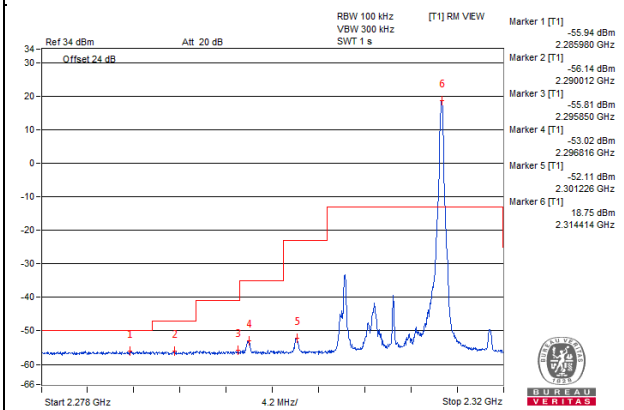
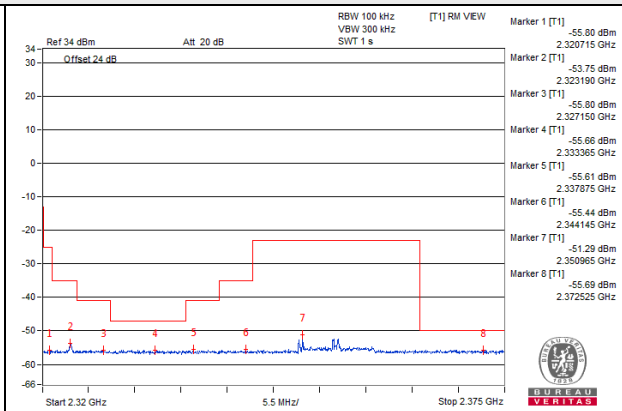
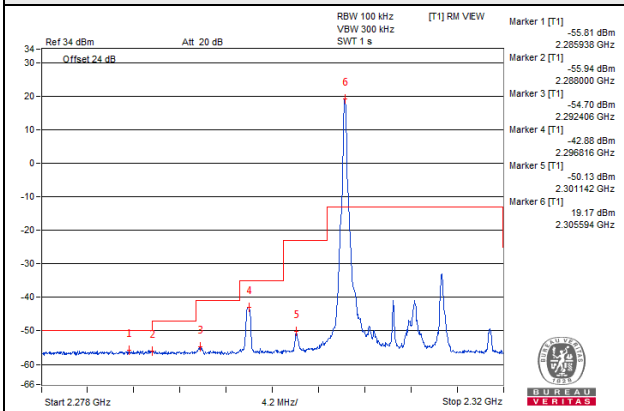


25 RB

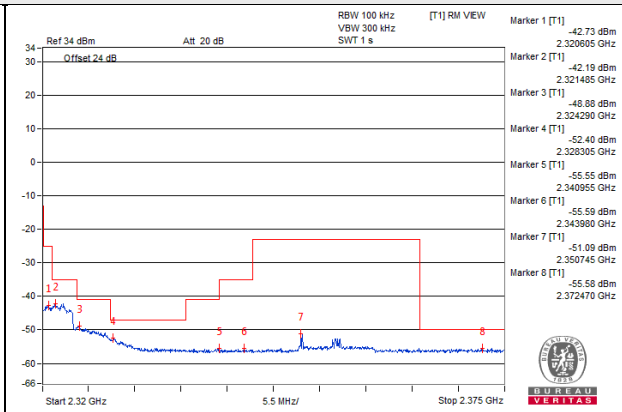
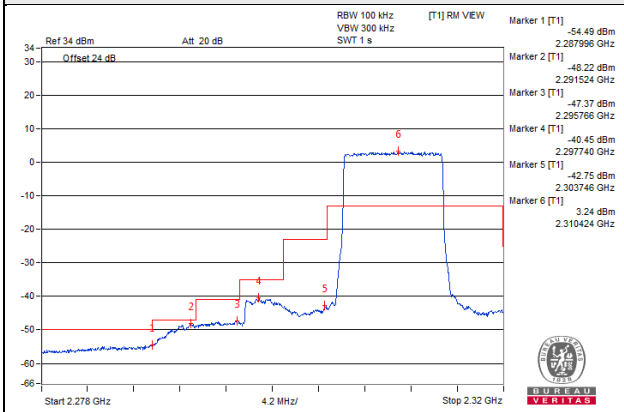


LTE Band 30 Channel Band width: 10MHz
Channel 27710

1 RB



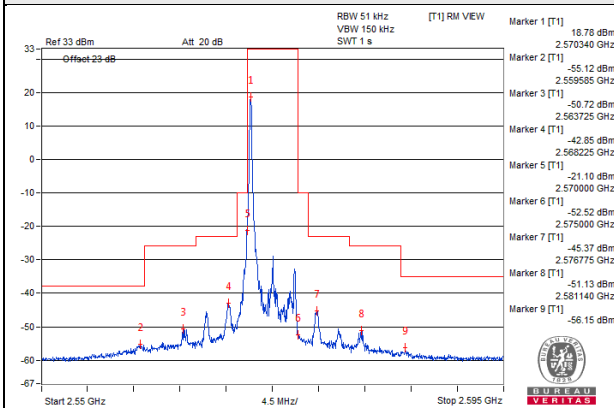
50 RB



LTE Band 38 Channel Band width: 5MHz

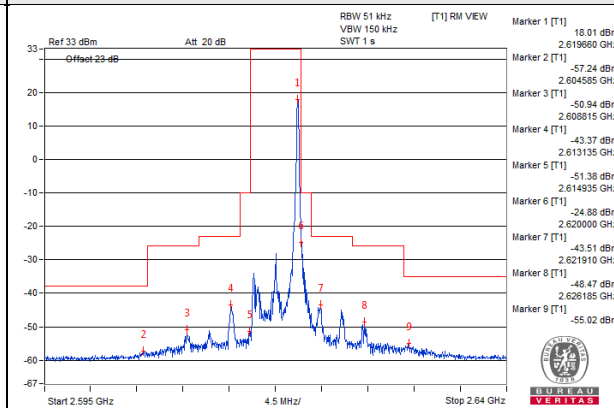
Channel 37775

1 RB

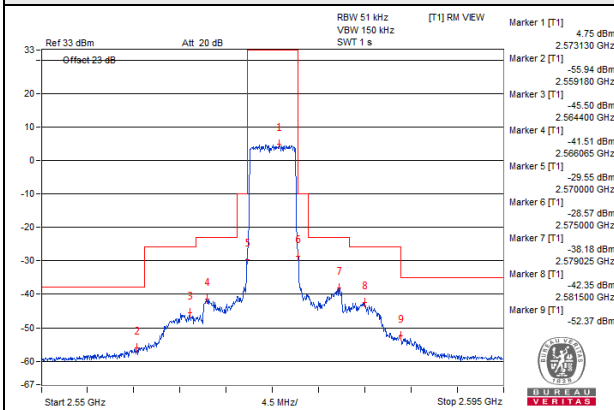


Channel 38225

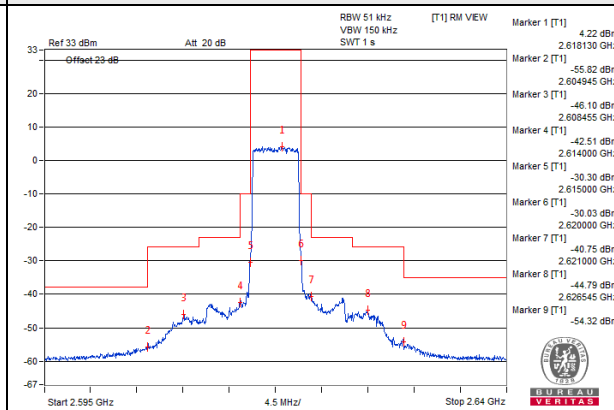
1 RB



25 RB



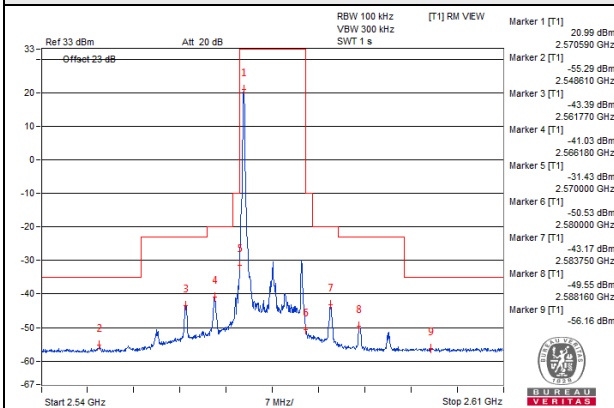
25 RB



LTE Band 38 Channel Band width: 10MHz

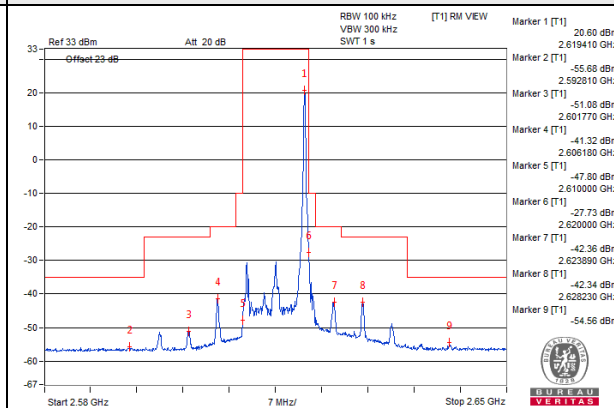
Channel 37800

1 RB

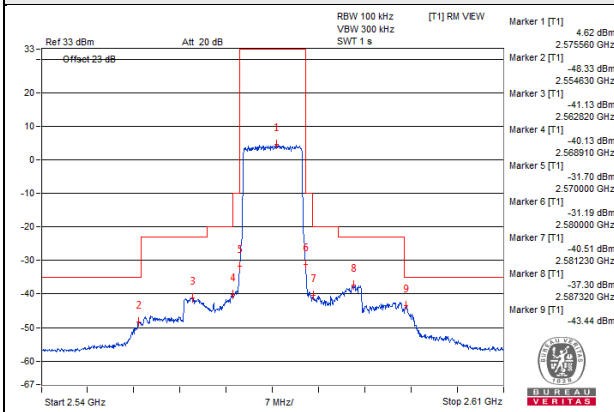


Channel 38200

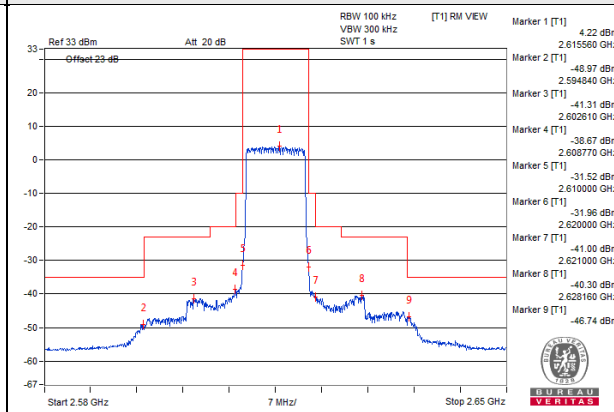
1 RB



50 RB



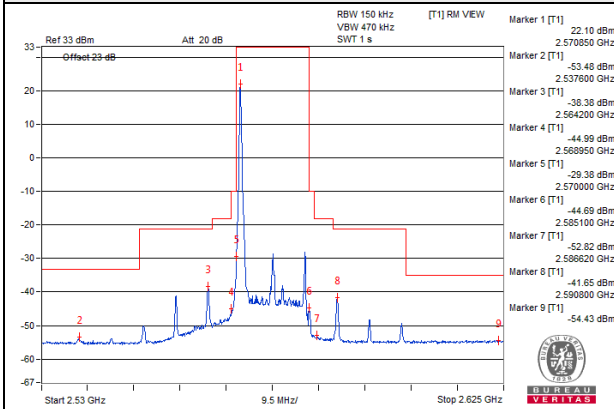
50 RB



LTE Band 38 Channel Band width: 15MHz

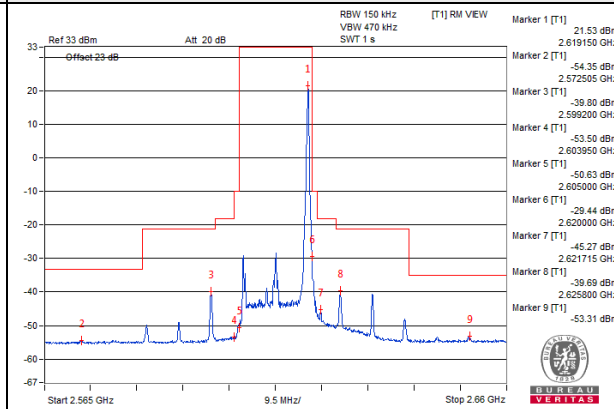
Channel 37825

1 RB

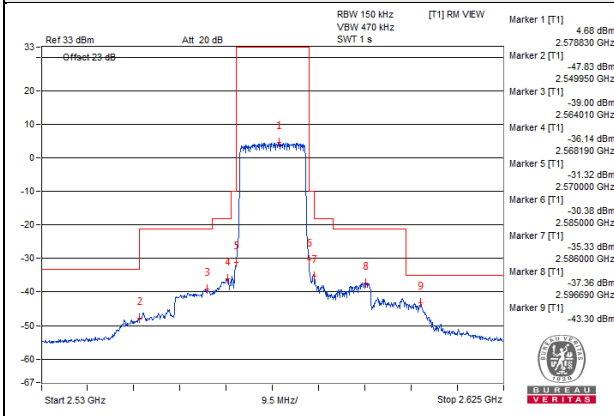


Channel 38175

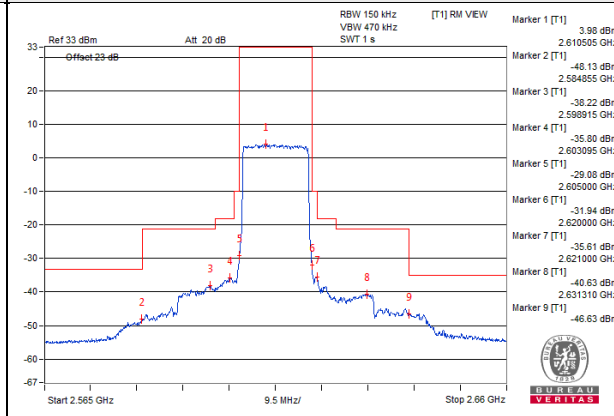
1 RB



75 RB



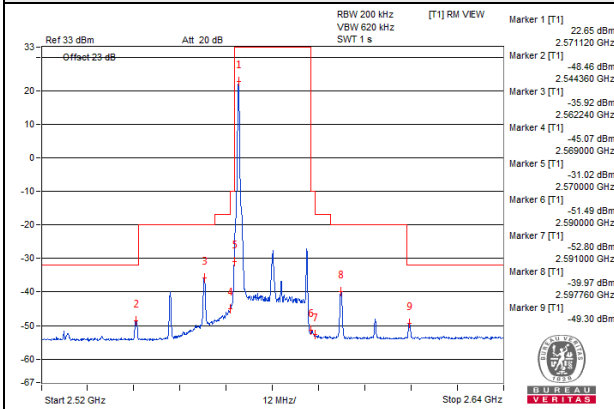
75 RB



LTE Band 38 Channel Band width: 20MHz

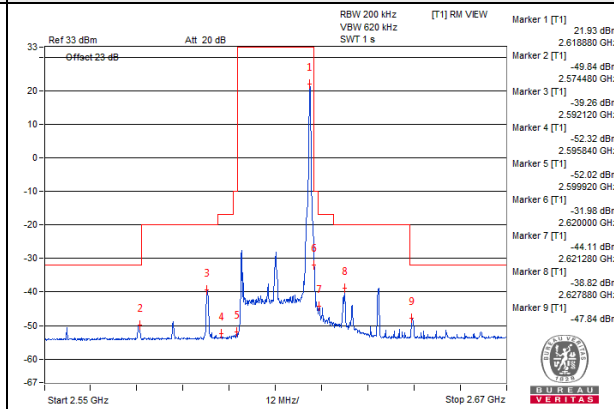
Channel 37850

1 RB

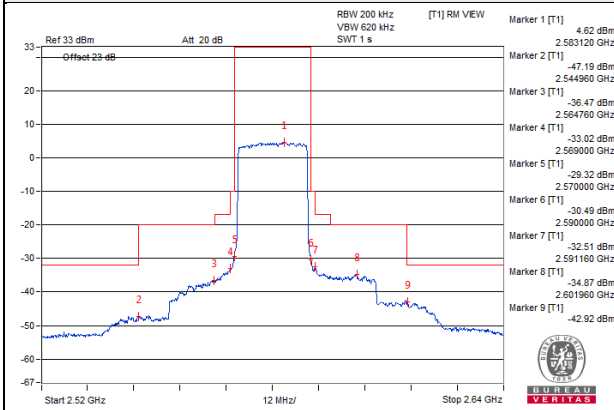


Channel 38150

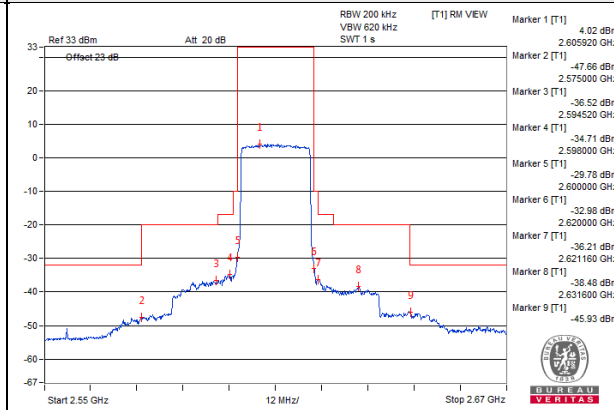
1 RB



100 RB

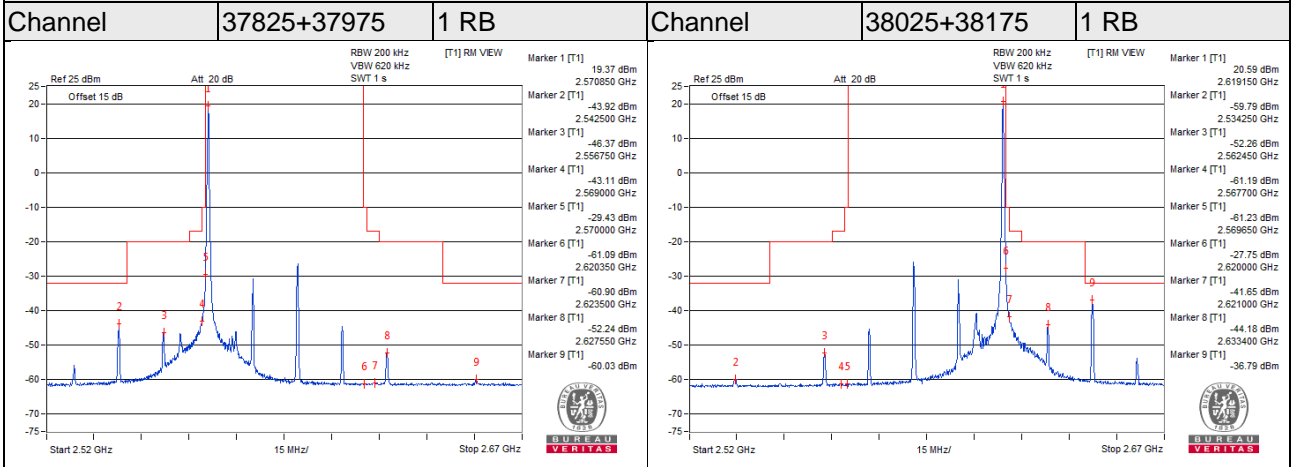


100 RB

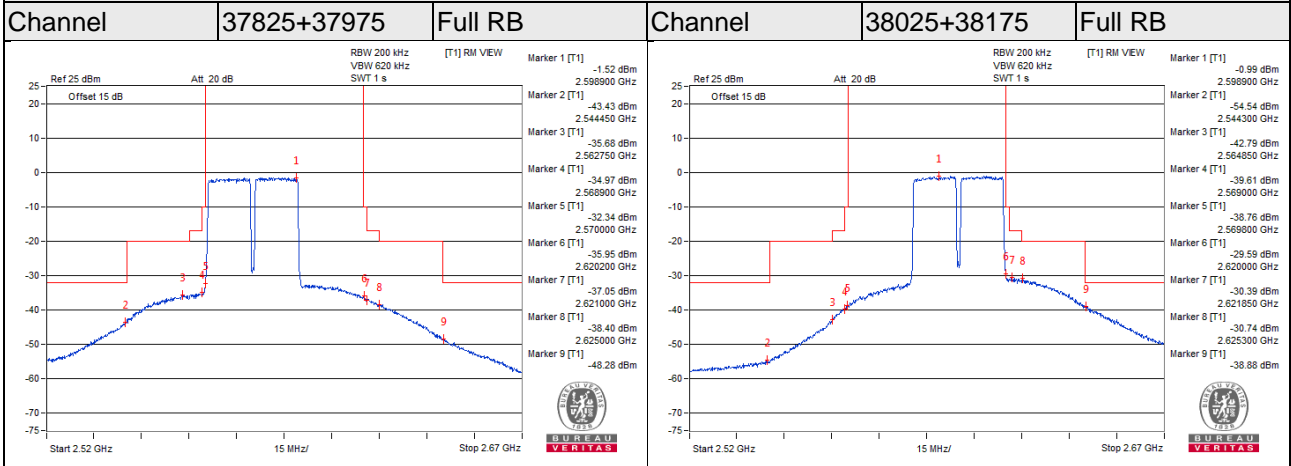


LTE CA_38C

Channel Bandwidth 15+15MHz



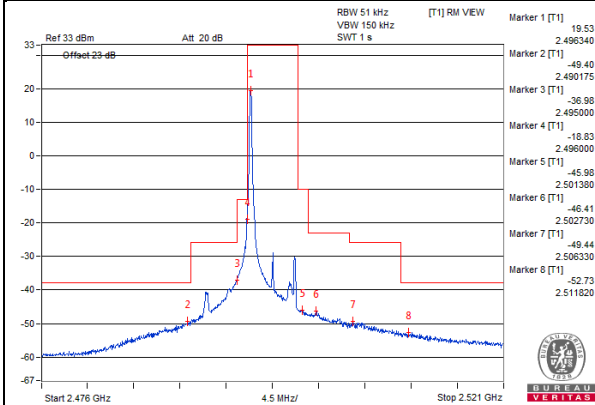
Channel Bandwidth 15+15MHz



LTE Band 41 Channel Band width: 5MHz

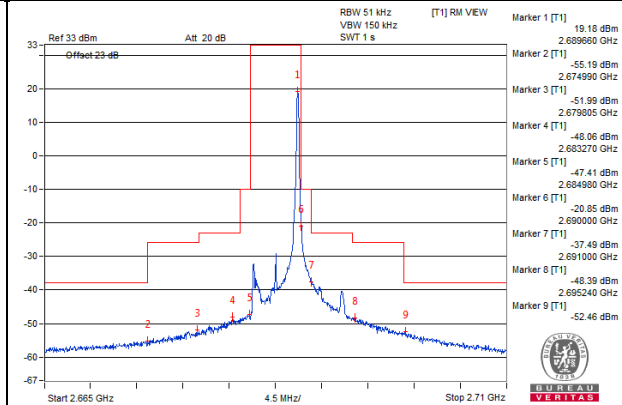
Channel 39675

1 RB

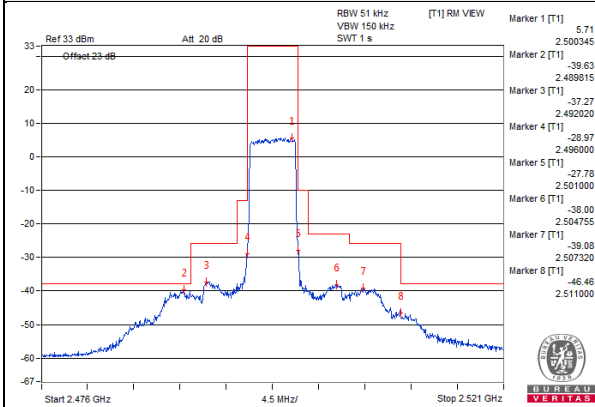


Channel 41565

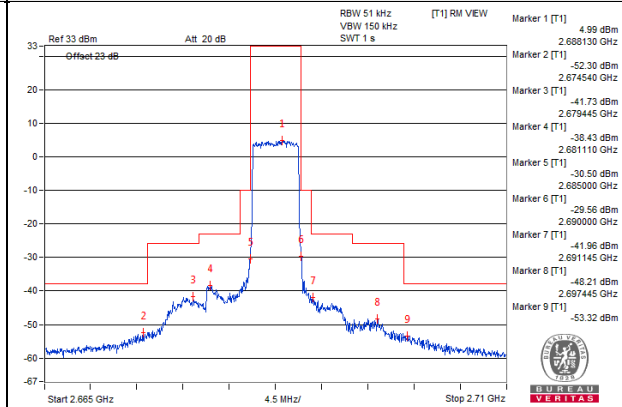
1 RB



25 RB



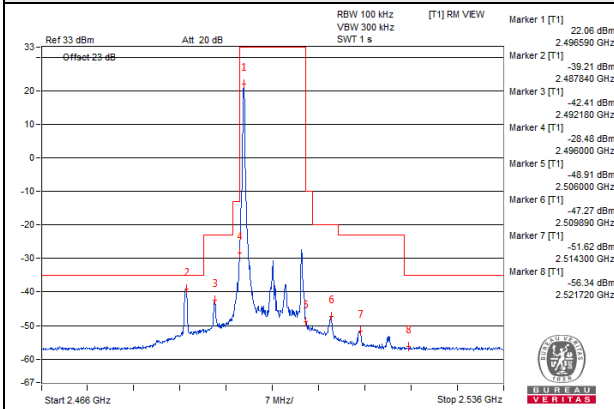
25 RB



LTE Band 41 Channel Band width: 10MHz

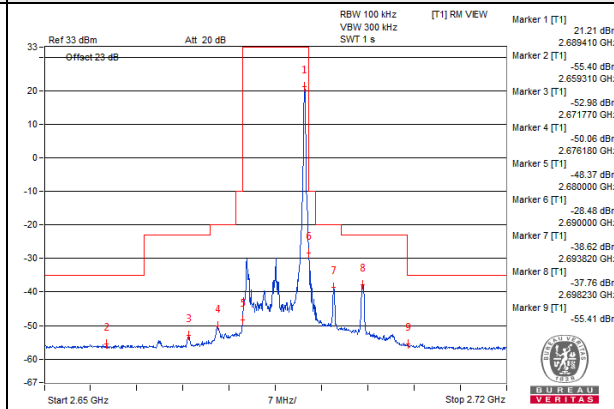
Channel 39700

1 RB

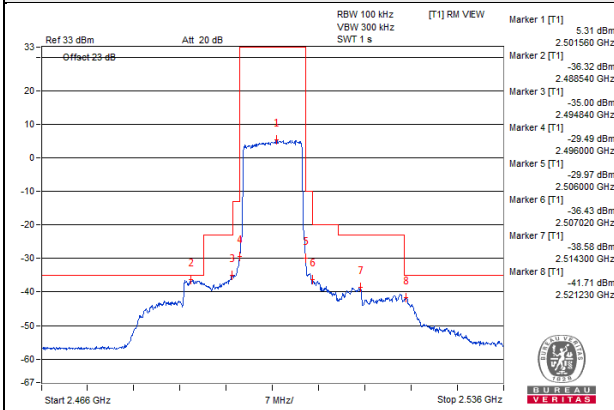


Channel 41540

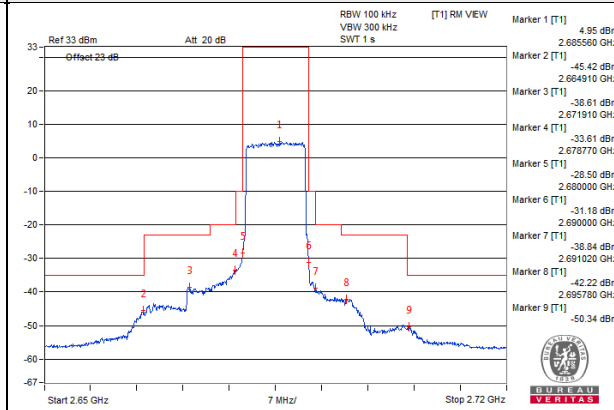
1 RB



50 RB



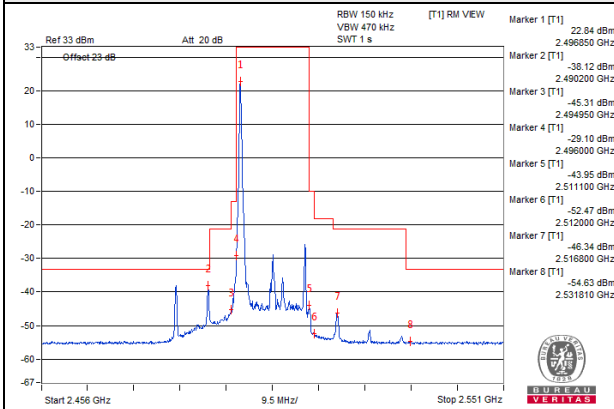
50 RB



LTE Band 41 Channel Band width: 15MHz

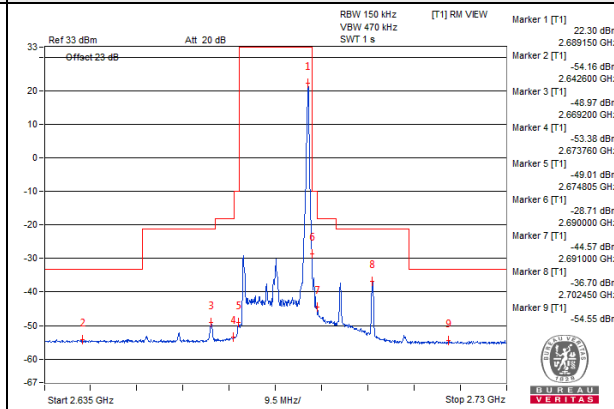
Channel 39725

1 RB

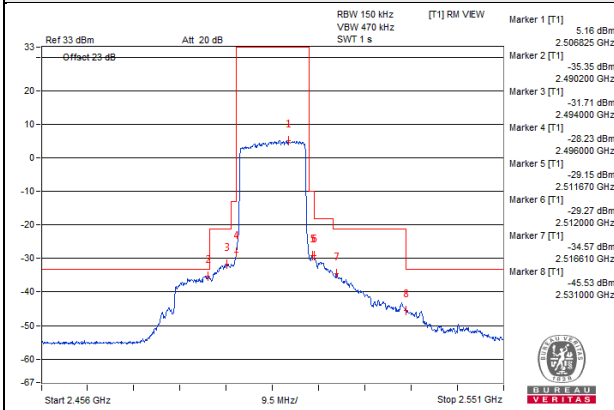


Channel 41515

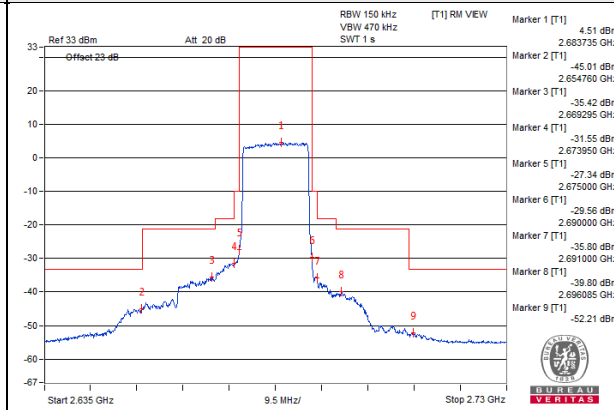
1 RB



75 RB



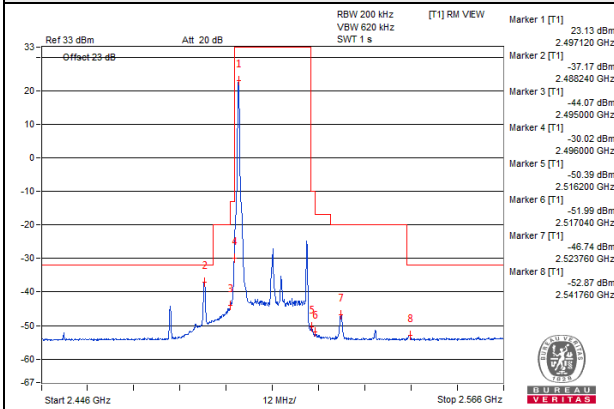
75 RB



LTE Band 41 Channel Band width: 20MHz

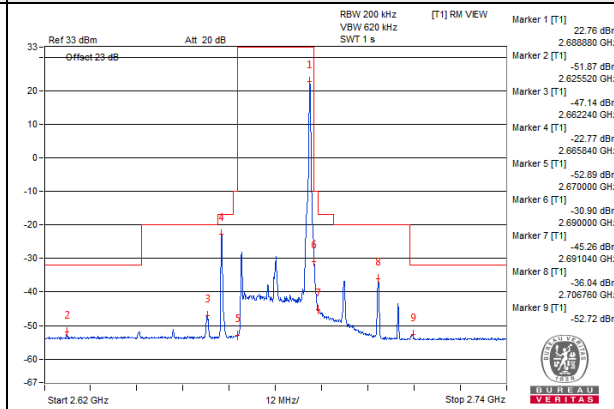
Channel 39750

1 RB

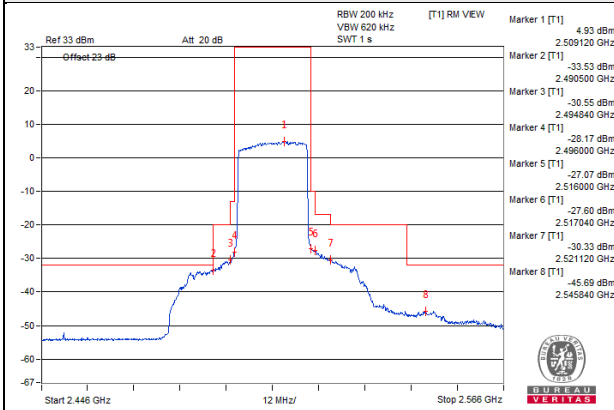


Channel 41490

1 RB



100 RB



100 RB

