

# FCC REPORT

## (LTE)

**Applicant:** Sun Cupid Technology (HK) Ltd.

**Address of Applicant:** 16/F, CEO Tower, 77 Wing Hong Street, Cheung Sha Wan, Kowloon, Hong Kong.

**Equipment Under Test (EUT)**

Product Name: LTE mobile phone

Model No.: N5701L, G1

Trade mark: NUU

**FCC ID:** 2ADINN5701L

**Applicable standards:** FCC CFR Title 47 Part 2  
FCC CFR Title 47 Part 22 Subpart H  
FCC CFR Title 47 Part 24 Subpart E  
FCC CFR Title 47 Part 27 Subpart L, M & H

**Date of sample receipt:** 11 Oct., 2017

**Date of Test:** 11 Oct., to 31 Oct., 2017

**Date of report issued:** 01 Nov., 2017

**Test Result:** PASS\*

\* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:



Bruce Zhang  
Laboratory Manager

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product and does not permit the use of the CCIS product certification mark. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

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## 2. Version

| Version No. | Date          | Description |
|-------------|---------------|-------------|
| 00          | 01 Nov., 2017 | Original    |
|             |               |             |
|             |               |             |
|             |               |             |
|             |               |             |

**Tested by:**

  
Test Engineer

**Date:**

01 Nov., 2017

**Reviewed by:**

  
Project Engineer

**Date:**

01 Nov., 2017

## 3. Contents

Page

|     |                                                        |     |
|-----|--------------------------------------------------------|-----|
| 1.  | COVER PAGE .....                                       | 1   |
| 2.  | VERSION .....                                          | 2   |
| 3.  | CONTENTS .....                                         | 3   |
| 4.  | TEST SUMMARY .....                                     | 4   |
| 5.  | GENERAL INFORMATION .....                              | 5   |
| 5.1 | CLIENT INFORMATION .....                               | 5   |
| 5.2 | GENERAL DESCRIPTION OF E.U.T .....                     | 5   |
| 5.3 | TEST ENVIRONMENT AND MODE .....                        | 14  |
| 5.4 | DESCRIPTION OF SUPPORT UNITS .....                     | 14  |
| 5.5 | MEASUREMENT UNCERTAINTY .....                          | 14  |
| 5.6 | LABORATORY FACILITY .....                              | 14  |
| 5.7 | LABORATORY LOCATION .....                              | 14  |
| 5.8 | TEST INSTRUMENTS LIST .....                            | 15  |
| 6.  | TEST RESULTS .....                                     | 16  |
| 6.1 | CONDUCTED OUTPUT POWER .....                           | 16  |
| 6.2 | PEAK-TO-AVERAGE RATIO .....                            | 26  |
| 6.3 | OCCUPY BANDWIDTH .....                                 | 30  |
| 6.4 | OUT OF BAND EMISSION AT ANTENNA TERMINALS .....        | 88  |
| 6.5 | ERP, EIRP MEASUREMENT .....                            | 245 |
| 6.6 | FIELD STRENGTH OF SPURIOUS RADIATION MEASUREMENT ..... | 259 |
| 1.1 | FREQUENCY STABILITY V.S. TEMPERATURE MEASUREMENT ..... | 286 |
| 1.2 | FREQUENCY STABILITY V.S. VOLTAGE MEASUREMENT .....     | 293 |
| 2.0 | TEST SETUP PHOTO .....                                 | 296 |
| 3.0 | EUT CONSTRUCTIONAL DETAILS .....                       | 297 |

## 4. Test Summary

| Test Items                                                              | Section in CFR 47                                                                                                    | Result                                 |
|-------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| RF Exposure (SAR)                                                       | Part 1.1307<br>Part 2.1093                                                                                           | Passed<br>(Please refer to SAR Report) |
| RF Output Power                                                         | Part 2.1046<br>Part 22.913 (a)(2)<br>Part 24.232 (c)<br>Part 27.50 (c)(10)<br>Part 27.50 (d)(4)<br>Part 27.50 (h)(2) | Pass                                   |
| Peak-to-Average Ratio                                                   | Part 24.232 (d)                                                                                                      | Pass                                   |
| Modulation Characteristics                                              | Part 2.1047                                                                                                          | Pass                                   |
| 99% & -26 dB Occupied Bandwidth                                         | Part 2.1049<br>Part 22.917(b)<br>Part 24.238(b)<br>Part 27.53(g)<br>Part 27.53(h)<br>Part 27.53(m)                   | Pass                                   |
| Spurious Emissions at Antenna Terminal                                  | Part 2.1051<br>Part 22.917(a)<br>Part 24.238 (a)<br>Part 27.53 (g)<br>Part 27.53 (h)<br>Part 27.53(m)                | Pass                                   |
| Field Strength of Spurious Radiation                                    | Part 2.1053<br>Part 22.917(a)<br>Part 24.238 (a)<br>Part 27.53 (g)<br>Part 27.53 (h)<br>Part 27.53(m)                | Pass                                   |
| Out of band emission, Band Edge                                         | Part 22.917(a)<br>Part 24.238 (a)<br>Part 27.53 (g)<br>Part 27.53 (h)<br>Part 27.53(m)                               | Pass                                   |
| Frequency stability vs. temperature                                     | Part 2.1055(a)(1)(b)                                                                                                 | Pass                                   |
| Frequency stability vs. voltage                                         | Part 2.1055(d)(1)(2)                                                                                                 | Pass                                   |
| Pass: The EUT complies with the essential requirements in the standard. |                                                                                                                      |                                        |

## 5. General Information

### 5.1 Client Information

|               |                                                                                           |
|---------------|-------------------------------------------------------------------------------------------|
| Applicant:    | Sun Cupid Technology (HK) Ltd.                                                            |
| Address:      | 16/F, CEO Tower, 77 Wing Hong Street, Cheung Sha Wan, Kowloon, Hong Kong.                 |
| Manufacturer: | Sun Cupid Technology (HK) Ltd.                                                            |
| Address:      | 16/F, CEO Tower, 77 Wing Hong Street, Cheung Sha Wan, Kowloon, Hong Kong.                 |
| Factory:      | SUNCUPID (ShenZhen) Electronic Ltd                                                        |
| Address:      | Baolong Industrial City, Longgang District, Shenzhen Hi-Tech Road, Building 1, A7, China. |

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

|                            |                                                                                                                                                                                                                                                                                                                                     |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Name:              | LTE mobile phone                                                                                                                                                                                                                                                                                                                    |
| Model No.:                 | N5701L, G1                                                                                                                                                                                                                                                                                                                          |
| Operation Frequency range: | LTE Band 2: TX: 1850MHz-1910MHz, RX: 1930MHz-1990MHz<br>LTE Band 4:TX: 1710MHz-1755MHz, RX: 2110MHz-2155MHz<br>LTE Band 5:TX: 824MHz-849MHz, RX: 869MHz-894MHz<br>LTE Band 7: TX: 2500MHz -2570MHz, RX: 2620MHz-2690MHz<br>LTE Band 12: TX: 699MHz -716MHz, RX: 729MHz-746MHz<br>LTE Band 17: TX: 704MHz -716MHz, RX: 734MHz-746MHz |
| Modulation type:           | QPSK, 16QAM                                                                                                                                                                                                                                                                                                                         |
| Antenna type:              | Internal Antenna                                                                                                                                                                                                                                                                                                                    |
| Antenna gain:              | LTE Band 2: 2.23 dBi<br>LTE Band4: 3.43dBi<br>LTE Band 5: 3.43dBi<br>LTE Band 7: 3.55dBi<br>LTE Band 12: 8.07dBi<br>LTE Band 17: 8.07dBi                                                                                                                                                                                            |
| AC adapter:                | Model: TPA-46050150UU<br>Input: AC100-240V, 50/60Hz ,0.3A<br>Output: DC 5.0V, 1500mA                                                                                                                                                                                                                                                |
| Power supply:              | Rechargeable Li-ion Battery DC3.8V-2800mAh                                                                                                                                                                                                                                                                                          |
| Remark:                    | Model No.: N5701L, G1 were identical inside, the electrical circuit design, layout, components used and internal wiring, with only difference being model name.                                                                                                                                                                     |

**Operation Frequency List:**

| LTE Band 2(1.4MHz) |                 | LTE Band 2(3MHz)  |                 |
|--------------------|-----------------|-------------------|-----------------|
| Channel            | Frequency (MHz) | Channel           | Frequency (MHz) |
| 18607              | 1850.70         | 18615             | 1851.50         |
| 18608              | 1850.80         | 18616             | 1851.60         |
| ....               | ....            | ....              | ....            |
| 18899              | 1879.90         | 18899             | 1879.90         |
| 18900              | 1880.00         | 18900             | 1880.00         |
| 18901              | 1880.10         | 18901             | 1880.10         |
| ...                | ...             | ...               | ...             |
| 19193              | 1909.20         | 19185             | 1908.40         |
| 19194              | 1909.30         | 19186             | 1908.50         |
| LTE Band 2(5MHz)   |                 | LTE Band 2(10MHz) |                 |
| Channel            | Frequency (MHz) | Channel           | Frequency (MHz) |
| 18625              | 1852.50         | 18650             | 1855.00         |
| 18626              | 1852.60         | 18651             | 1855.10         |
| ....               | ....            | ....              | ....            |
| 18899              | 1879.90         | 18899             | 1879.90         |
| 18900              | 1880.00         | 18900             | 1880.00         |
| 18901              | 1880.10         | 18901             | 1880.10         |
| ...                | ...             | ...               | ...             |
| 19175              | 1907.40         | 19150             | 1904.90         |
| 19176              | 1907.50         | 19151             | 1905.00         |
| LTE Band 2(15MHz)  |                 | LTE Band 2(20MHz) |                 |
| Channel            | Frequency (MHz) | Channel           | Frequency (MHz) |
| 18675              | 1857.50         | 18700             | 1860.00         |
| 18676              | 1857.60         | 18701             | 1860.10         |
| ....               | ....            | ....              | ....            |
| 18899              | 1879.90         | 18899             | 1879.90         |
| 18900              | 1880.00         | 18900             | 1880.00         |
| 18901              | 1880.10         | 18901             | 1880.10         |
| ...                | ...             | ...               | ...             |
| 19125              | 1902.40         | 19100             | 1899.90         |
| 19126              | 1902.50         | 19101             | 1900.00         |

| LTE Band 4(1.4MHz) |                 | LTE Band 4(3MHz)  |                 |
|--------------------|-----------------|-------------------|-----------------|
| Channel            | Frequency (MHz) | Channel           | Frequency (MHz) |
| 19957              | 1710.70         | 19965             | 1711.50         |
| 19958              | 1710.80         | 19966             | 1711.60         |
| ....               | ....            | ....              | ....            |
| 20174              | 1732.40         | 20174             | 1732.40         |
| 20175              | 1732.50         | 20175             | 1732.50         |
| 20176              | 1732.60         | 20176             | 1732.60         |
| ...                | ...             | ...               | ...             |
| 20392              | 1754.20         | 20384             | 1753.40         |
| 20393              | 1754.30         | 20385             | 1753.50         |
| LTE Band 4(5MHz)   |                 | LTE Band 4(10MHz) |                 |
| Channel            | Frequency (MHz) | Channel           | Frequency (MHz) |
| 19975              | 1712.50         | 20000             | 1715.00         |
| 19976              | 1712.60         | 20001             | 1715.10         |
| ....               | ....            | ....              | ....            |
| 20174              | 1732.40         | 20174             | 1732.40         |
| 20175              | 1732.50         | 20175             | 1732.50         |
| 20176              | 1732.60         | 20176             | 1732.60         |
| ...                | ...             | ...               | ...             |
| 20374              | 1752.40         | 20349             | 1749.90         |
| 20375              | 1752.50         | 20350             | 1750.00         |
| LTE Band 4(15MHz)  |                 | LTE Band 4(20MHz) |                 |
| Channel            | Frequency (MHz) | Channel           | Frequency (MHz) |
| 20025              | 1717.50         | 20050             | 1720.00         |
| 20026              | 1717.60         | 20051             | 1720.10         |
| ....               | ....            | ....              | ....            |
| 20174              | 1732.40         | 20174             | 1732.40         |
| 20175              | 1732.50         | 20175             | 1732.50         |
| 20176              | 1732.60         | 20176             | 1732.60         |
| ...                | ...             | ...               | ...             |
| 20324              | 1747.40         | 20299             | 1744.90         |
| 20325              | 1747.50         | 20300             | 1745.00         |

| LTE Band 5(1.4MHz) |                 | LTE Band 5(3MHz)  |                 |
|--------------------|-----------------|-------------------|-----------------|
| Channel            | Frequency (MHz) | Channel           | Frequency (MHz) |
| 20407              | 824.70          | 20415             | 825.50          |
| 20408              | 824.80          | 20416             | 825.60          |
| ....               | ....            | ....              | ....            |
| 20524              | 836.40          | 20524             | 836.40          |
| 20525              | 836.50          | 20525             | 836.50          |
| 20525              | 836.60          | 20525             | 836.60          |
| ...                | ...             | ...               | ...             |
| 20642              | 848.20          | 20634             | 847.40          |
| 20643              | 848.30          | 20635             | 847.50          |
| LTE Band 5(5MHz)   |                 | LTE Band 5(10MHz) |                 |
| Channel            | Frequency (MHz) | Channel           | Frequency (MHz) |
| 20425              | 826.50          | 20450             | 829.00          |
| 20426              | 826.60          | 20451             | 829.10          |
| ....               | ....            | ....              | ....            |
| 20524              | 836.40          | 20524             | 836.40          |
| 20525              | 836.50          | 20525             | 836.50          |
| 20525              | 836.60          | 20525             | 836.60          |
| ...                | ...             | ...               | ...             |
| 20624              | 846.40          | 20599             | 843.90          |
| 20625              | 846.50          | 20600             | 844.00          |



| LTE Band 7(5MHz)  |                 | LTE Band 7(10MHz) |                 |
|-------------------|-----------------|-------------------|-----------------|
| Channel           | Frequency (MHz) | Channel           | Frequency (MHz) |
| 20775             | 2502.50         | 20800             | 2505.00         |
| 20776             | 2502.60         | 20801             | 2502.10         |
| ....              | ....            | ....              | ....            |
| 21099             | 2534.90         | 21099             | 2534.90         |
| 21100             | 2535.00         | 21100             | 2535.00         |
| 21101             | 2535.20         | 21101             | 2535.20         |
| ...               | ...             | ...               | ...             |
| 21424             | 2567.40         | 21399             | 2564.90         |
| 21425             | 2567.50         | 21400             | 2565.00         |
| LTE Band 7(15MHz) |                 | LTE Band 7(20MHz) |                 |
| Channel           | Frequency (MHz) | Channel           | Frequency (MHz) |
| 20825             | 2507.50         | 20850             | 2510.00         |
| 20826             | 2507.60         | 20851             | 2510.10         |
| ....              | ....            | ....              | ....            |
| 21099             | 2534.90         | 21099             | 2534.90         |
| 21100             | 2535.00         | 21100             | 2535.00         |
| 21101             | 2535.20         | 21101             | 2535.20         |
| ...               | ...             | ...               | ...             |
| 21374             | 2562.40         | 21349             | 2559.90         |
| 21375             | 2562.50         | 21350             | 2560.00         |

| LTE Band 12(1.4MHz) |                 | LTE Band 12(3MHz)  |                 |
|---------------------|-----------------|--------------------|-----------------|
| Channel             | Frequency (MHz) | Channel            | Frequency (MHz) |
| 23017               | 699.70          | 23025              | 700.50          |
| 23018               | 699.80          | 23026              | 700.60          |
| ....                | ....            | ....               | ....            |
| 23094               | 707.40          | 23094              | 707.40          |
| 23095               | 707.50          | 23095              | 707.50          |
| 23096               | 707.60          | 23096              | 707.60          |
| ...                 | ...             | ...                | ...             |
| 23174               | 715.20          | 23164              | 714.40          |
| 23175               | 715.30          | 23165              | 714.50          |
| LTE Band 12(5MHz)   |                 | LTE Band 12(10MHz) |                 |
| Channel             | Frequency (MHz) | Channel            | Frequency (MHz) |
| 23035               | 701.50          | 23060              | 704.00          |
| 23036               | 701.60          | 23061              | 704.10          |
| ....                | ....            | ....               | ....            |
| 23094               | 707.40          | 23094              | 707.40          |
| 23095               | 707.50          | 23095              | 707.50          |
| 23096               | 707.60          | 23096              | 707.60          |
| ...                 | ...             | ...                | ...             |
| 23154               | 713.40          | 23129              | 710.90          |
| 23155               | 713.50          | 23130              | 711.00          |

| LTE Band 17(5MHz) |                 | LTE Band 17(10MHz) |                 |
|-------------------|-----------------|--------------------|-----------------|
| Channel           | Frequency (MHz) | Channel            | Frequency (MHz) |
| 23755             | 706.50          | 23780              | 709.00          |
| 23756             | 706.60          | 23781              | 709.10          |
| ....              | ....            | ....               | ....            |
| 23789             | 709.90          | 23789              | 709.90          |
| 23790             | 710.00          | 23790              | 710.00          |
| 23791             | 710.10          | 23791              | 710.10          |
| ...               | ...             | ...                | ...             |
| 23824             | 713.40          | 23799              | 710.90          |
| 23825             | 713.50          | 23800              | 711.00          |

Regards to the operating frequency range, the lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channels as below:

| LTE Band 2(1.4MHz) |       |                 | LTE Band 2(3MHz)  |       |                 |
|--------------------|-------|-----------------|-------------------|-------|-----------------|
| Channel            |       | Frequency (MHz) | Channel           |       | Frequency (MHz) |
| Lowest channel     | 18607 | 1850.70         | Lowest channel    | 18615 | 1851.50         |
| Middle channel     | 18900 | 1880.00         | Middle channel    | 18900 | 1880.00         |
| Highest channel    | 19193 | 1909.30         | Highest channel   | 19185 | 1908.50         |
| LTE Band 2(5MHz)   |       |                 | LTE Band 2(10MHz) |       |                 |
| Channel            |       | Frequency (MHz) | Channel           |       | Frequency (MHz) |
| Lowest channel     | 18625 | 1852.50         | Lowest channel    | 18650 | 1855.00         |
| Middle channel     | 18900 | 1880.00         | Middle channel    | 18900 | 1880.00         |
| Highest channel    | 19175 | 1907.50         | Highest channel   | 19150 | 1905.00         |
| LTE Band 2(15MHz)  |       |                 | LTE Band 2(20MHz) |       |                 |
| Channel            |       | Frequency (MHz) | Channel           |       | Frequency (MHz) |
| Lowest channel     | 18675 | 1857.50         | Lowest channel    | 18700 | 1860.00         |
| Middle channel     | 18900 | 1880.00         | Middle channel    | 18900 | 1880.00         |
| Highest channel    | 19125 | 1902.50         | Highest channel   | 19100 | 1900.00         |

| LTE Band 4(1.4MHz) |       |                 | LTE Band 4(3MHz)  |       |                 |
|--------------------|-------|-----------------|-------------------|-------|-----------------|
| Channel:           |       | Frequency (MHz) | Channel           |       | Frequency (MHz) |
| Lowest channel     | 19957 | 1710.70         | Lowest channel    | 19965 | 1711.50         |
| Middle channel     | 20175 | 1732.50         | Middle channel    | 20175 | 1732.50         |
| Highest channel    | 20393 | 1754.30         | Highest channel   | 20385 | 1753.50         |
| LTE Band 4(5MHz)   |       |                 | LTE Band 4(10MHz) |       |                 |
| Channel            |       | Frequency (MHz) | Channel           |       | Frequency (MHz) |
| Lowest channel     | 19975 | 1712.50         | Lowest channel    | 20000 | 1715.00         |
| Middle channel     | 20175 | 1732.50         | Middle channel    | 20175 | 1732.50         |
| Highest channel    | 20375 | 1752.50         | Highest channel   | 20350 | 1750.00         |
| LTE Band 4(15MHz)  |       |                 | LTE Band 4(20MHz) |       |                 |
| Channel            |       | Frequency (MHz) | Channel           |       | Frequency (MHz) |
| Lowest channel     | 20025 | 1717.50         | Lowest channel    | 20050 | 1720.00         |
| Middle channel     | 20175 | 1732.50         | Middle channel    | 20175 | 1732.50         |
| Highest channel    | 20325 | 1747.50         | Highest channel   | 20300 | 1745.00         |

| LTE Band 5(1.4MHz) |       |                 | LTE Band 5(3MHz)  |       |                 |
|--------------------|-------|-----------------|-------------------|-------|-----------------|
| Channel            |       | Frequency (MHz) | Channel           |       | Frequency (MHz) |
| Lowest channel     | 20407 | 824.70          | Lowest channel    | 20415 | 825.50          |
| Middle channel     | 20525 | 836.50          | Middle channel    | 20525 | 836.50          |
| Highest channel    | 20643 | 848.30          | Highest channel   | 20635 | 847.50          |
| LTE Band 5(5MHz)   |       |                 | LTE Band 5(10MHz) |       |                 |
| Channel            |       | Frequency (MHz) | Channel           |       | Frequency (MHz) |
| Lowest channel     | 20425 | 826.50          | Lowest channel    | 20450 | 829.00          |
| Middle channel     | 20525 | 836.50          | Middle channel    | 20525 | 836.50          |
| Highest channel    | 20625 | 846.50          | Highest channel   | 20600 | 844.00          |

| LTE Band 7(5MHz)  |       |                 | LTE Band 7(10MHz) |       |                 |
|-------------------|-------|-----------------|-------------------|-------|-----------------|
| Channel           |       | Frequency (MHz) | Channel           |       | Frequency (MHz) |
| Lowest channel    | 20775 | 2502.50         | Lowest channel    | 20800 | 2505.00         |
| Middle channel    | 21100 | 2535.00         | Middle channel    | 21100 | 2535.00         |
| Highest channel   | 21425 | 2567.50         | Highest channel   | 21400 | 2565.00         |
| LTE Band 7(15MHz) |       |                 | LTE Band 7(20MHz) |       |                 |
| Channel           |       | Frequency (MHz) | Channel           |       | Frequency (MHz) |
| Lowest channel    | 20825 | 2507.50         | Lowest channel    | 20850 | 2510.00         |
| Middle channel    | 21100 | 2535.00         | Middle channel    | 21100 | 2535.00         |
| Highest channel   | 21375 | 2562.50         | Highest channel   | 21350 | 2560.00         |

| LTE Band 12(1.4MHz) |       |                 | LTE Band 12(3MHz)  |       |                 |
|---------------------|-------|-----------------|--------------------|-------|-----------------|
| Channel             |       | Frequency (MHz) | Channel            |       | Frequency (MHz) |
| Lowest channel      | 23017 | 699.70          | Lowest channel     | 23025 | 700.50          |
| Middle channel      | 23095 | 707.50          | Middle channel     | 23095 | 707.50          |
| Highest channel     | 23175 | 715.30          | Highest channel    | 23165 | 714.50          |
| LTE Band 12(5MHz)   |       |                 | LTE Band 12(10MHz) |       |                 |
| Channel             |       | Frequency (MHz) | Channel            |       | Frequency (MHz) |
| Lowest channel      | 23035 | 701.50          | Lowest channel     | 23060 | 704.00          |
| Middle channel      | 23095 | 707.50          | Middle channel     | 23095 | 707.50          |
| Highest channel     | 23155 | 713.50          | Highest channel    | 23130 | 711.00          |

| LTE Band 17(5MHz) |       |                 | LTE Band 17(10MHz) |       |                 |
|-------------------|-------|-----------------|--------------------|-------|-----------------|
| Channel           |       | Frequency (MHz) | Channel            |       | Frequency (MHz) |
| Lowest channel    | 23755 | 706.50          | Lowest channel     | 23780 | 709.00          |
| Middle channel    | 23790 | 710.00          | Middle channel     | 23790 | 710.00          |
| Highest channel   | 23825 | 713.50          | Highest channel    | 23800 | 711.00          |

### 5.3 Test environment and mode

| Operating Environment:                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|
| Temperature:                                                                                                                                                                                                                                                                                                                                                                                                                 | Normal: 15°C ~ 35°C, Extreme: -30°C ~ +50°C                      |
| Humidity:                                                                                                                                                                                                                                                                                                                                                                                                                    | 20 % ~ 75 % RH                                                   |
| Atmospheric Pressure:                                                                                                                                                                                                                                                                                                                                                                                                        | 1008 mbar                                                        |
| Voltage:                                                                                                                                                                                                                                                                                                                                                                                                                     | Nominal: 3.8Vdc, Extreme: Low 3.5 Vdc, High 4.35 Vdc             |
| Test mode:                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                  |
| LTE QPSK mode                                                                                                                                                                                                                                                                                                                                                                                                                | Keep the EUT communication with simulated station in QPSK mode   |
| LTE 16-QAM mode                                                                                                                                                                                                                                                                                                                                                                                                              | Keep the EUT communication with simulated station in 16-QAM mode |
| Remark: The EUT has been tested under continuous transmitting mode. Channel Low, Mid and High for each type band with rated data rate were chosen for full testing. The field strength of spurious radiation emission was measured as EUT stand-up position (H mode) and lie down position (E1, E2 mode) for these modes with power adaptor, earphone and Data cable. Just the worst case position (H mode) shown in report. |                                                                  |

### 5.4 Description of Support Units

| Test Equipment    | Manufacturer | Model No. | Serial No. |
|-------------------|--------------|-----------|------------|
| Simulated Station | Anritsu      | MT8820C   | 6201026545 |

### 5.5 Measurement Uncertainty

| Parameters                          | Expanded Uncertainty |
|-------------------------------------|----------------------|
| Radiated Emission (9kHz ~ 30MHz)    | 4.24 dB (k=2)        |
| Radiated Emission (30MHz ~ 1000MHz) | 4.35 dB (k=2)        |
| Radiated Emission (1GHz ~ 18GHz)    | 4.44 dB (k=2)        |
| Radiated Emission (18GHz ~ 26.5GHz) | 4.56 dB (k=2)        |

### 5.6 Laboratory Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **FCC - Registration No.: 727551**

Shenzhen Zhongjian Nanfang Testing Co., Ltd. has been accredited as a testing laboratory by FCC (Federal Communications Commission). The Registration No. is 727551.

- **IC - Registration No.: 10106A-1**

The 3m Semi-anechoic chamber of Shenzhen Zhongjian Nanfang Testing Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1.

- **CNAS - Registration No.: CNAS L6048**

Shenzhen Zhongjian Nanfang Testing Co., Ltd. is accredited to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing. The Registration No. is CNAS L6048.

- **A2LA - Registration No.: 4346.01**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 General requirements for the competence of testing and calibration laboratories. The test scope can be found as below link: <https://portal.a2la.org/scopepdf/4346-01.pdf>

### 5.7 Laboratory Location

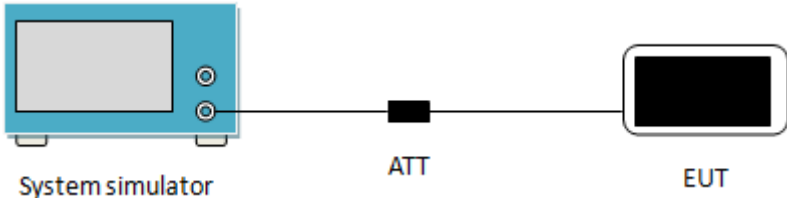
Shenzhen Zhongjian Nanfang Testing Co., Ltd.  
Address: No. B-C, 1/F., Building 2, Laodong No.2 Industrial Park, Xixiang Road,  
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Email: info@ccis-cb.com, Website: <http://www.ccis-cb.com>

## 5.8 Test Instruments list

| Test Equipment               | Manufacturer    | Model No.     | Serial No.    | Cal. Date<br>(mm-dd-yy) | Cal. Due date<br>(mm-dd-yy) |
|------------------------------|-----------------|---------------|---------------|-------------------------|-----------------------------|
| 3m SAC                       | SAEMC           | 9m*6m*6m      | 966           | 07-22-2017              | 07-21-2020                  |
| BiConiLog Antenna            | SCHWARZBECK     | VULB9163      | 497           | 02-25-2017              | 02-24-2018                  |
| Biconical Antenna            | SCHWARZBECK     | VUBA9117      | 359           | 06-22-2017              | 06-21-2018                  |
| Horn Antenna                 | SCHWARZBECK     | BBHA9120D     | 916           | 02-25-2017              | 02-24-2018                  |
| Horn Antenna                 | SCHWARZBECK     | BBHA9120D     | 1805          | 02-25-2017              | 02-24-2018                  |
| EMI Test Software            | AUDIX           | E3            | 6.110919b     | N/A                     | N/A                         |
| Pre-amplifier                | HP              | 8447D         | 2944A09358    | 02-25-2017              | 02-24-2018                  |
| Pre-amplifier                | CD              | PAP-1G18      | 11804         | 02-25-2017              | 02-24-2018                  |
| Spectrum analyzer            | Rohde & Schwarz | FSP30         | 101454        | 02-25-2017              | 02-24-2018                  |
| EMI Test Receiver            | Rohde & Schwarz | ESRP7         | 101070        | 02-25-2017              | 02-24-2018                  |
| Spectrum Analyzer            | Agilent         | N9020A        | MY50510123    | 02-25-2017              | 02-24-2018                  |
| Signal Generator             | Rohde & Schwarz | SMX           | 835454/016    | 02-25-2017              | 02-24- 2018                 |
| Signal Generator             | R&S             | SMR20         | 1008100050    | 02-25-2017              | 02-24-2018                  |
| RF Switch Unit               | MWRFTTEST       | MW200         | N/A           | N/A                     | N/A                         |
| Cable                        | ZDECL           | Z108-NJ-NJ-81 | 1608458       | 02-25-2017              | 02-24-2018                  |
| Cable                        | MICRO-COAX      | MFR64639      | K10742-5      | 02-25-2017              | 02-24-2018                  |
| Cable                        | SUHNER          | SUCOFLEX100   | 58193/4PE     | 02-25-2017              | 02-24-2018                  |
| DC Power Supply              | XinNuoEr        | WYK-10020K    | 1409050110020 | 02-25-2017              | 02-24-2018                  |
| Temperature Humidity Chamber | HengPu          | HPGDS-500     | 20140828008   | 02-25-2017              | 02-24-2018                  |
| Simulated Station            | Rohde & Schwarz | CMW500        | 140493        | 06-24-2017              | 06-23-2018                  |

## 6. Test results

### 6.1 Conducted Output Power

|                   |                                                                                                                                                                                                                                                                                                                                                                                |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Requirement: | FCCPart 24.232 (c), part 27.50(c), part 27.50(d), Part 27.50 (h), Part 22.913 (a)                                                                                                                                                                                                                                                                                              |
| Test Method:      | ANSI/TIA-603-D 2010                                                                                                                                                                                                                                                                                                                                                            |
| Limit:            | LTE Band2: 2W<br>LTE Band 4: 1W<br>LTE Band 5: 7W<br>LTE Band 7: 2W<br>LTE Band 12: 3W<br>LTE Band 17: 3W                                                                                                                                                                                                                                                                      |
| Test Setup:       |  <p>The diagram illustrates the test setup. On the left is a blue rectangular box labeled 'System simulator'. A line connects it to a small black rectangle labeled 'ATT' (attenuator). Another line connects the 'ATT' to a black rectangular box labeled 'EUT' (Equipment Under Test).</p> |
| Test Procedure:   | The transmitter output was connected to a calibrated attenuator, the other end of which was connected to the CMW500. Transmitter output power was read off in dBm.                                                                                                                                                                                                             |
| Test Instruments: | Refer to section 5.8 for details                                                                                                                                                                                                                                                                                                                                               |
| Test mode:        | Refer to section 5.3 for details                                                                                                                                                                                                                                                                                                                                               |
| Test results:     | Passed                                                                                                                                                                                                                                                                                                                                                                         |



Measurement Data:

| LTE Band | Bandwidth (MHz) | Modulation | RB Size | RB Offset | Average Power (dBm) |           |           |
|----------|-----------------|------------|---------|-----------|---------------------|-----------|-----------|
|          |                 |            |         |           | 18607               | 18900     | 19193     |
|          |                 |            |         |           | 1850.7MHz           | 1880.0MHz | 1909.3MHz |
| 2        | 1.4             | QPSK       | 1       | 0         | 21.90               | 21.92     | 22.06     |
|          |                 |            | 1       | 2         | 21.81               | 21.95     | 22.04     |
|          |                 |            | 1       | 5         | 21.93               | 21.94     | 22.13     |
|          |                 |            | 3       | 0         | 21.06               | 21.00     | 21.21     |
|          |                 |            | 3       | 1         | 20.96               | 20.93     | 21.11     |
|          |                 |            | 3       | 2         | 20.97               | 20.99     | 21.16     |
|          |                 |            | 6       | 0         | 21.01               | 21.10     | 21.14     |
|          |                 | 16QAM      | 1       | 0         | 21.14               | 20.94     | 21.16     |
|          |                 |            | 1       | 2         | 21.04               | 21.44     | 21.41     |
|          |                 |            | 1       | 5         | 21.41               | 21.10     | 21.16     |
|          |                 |            | 3       | 0         | 21.18               | 20.93     | 21.19     |
|          |                 |            | 3       | 1         | 21.09               | 21.17     | 20.97     |
|          |                 |            | 3       | 2         | 21.09               | 21.11     | 21.15     |
|          |                 |            | 6       | 0         | 20.96               | 20.96     | 21.05     |
| LTE Band | Bandwidth (MHz) | Modulation | RB Size | RB Offset | Average Power (dBm) |           |           |
|          |                 |            |         |           | 18615               | 18900     | 19185     |
|          |                 |            |         |           | 1851.5MHz           | 1880.0MHz | 1908.5MHz |
| 2        | 3               | QPSK       | 1       | 0         | 21.90               | 21.90     | 21.93     |
|          |                 |            | 1       | 7         | 21.99               | 21.94     | 22.02     |
|          |                 |            | 1       | 14        | 21.90               | 21.85     | 21.91     |
|          |                 |            | 8       | 0         | 21.04               | 21.06     | 21.11     |
|          |                 |            | 8       | 4         | 21.04               | 21.03     | 21.14     |
|          |                 |            | 8       | 7         | 21.05               | 21.02     | 21.10     |
|          |                 |            | 15      | 0         | 21.03               | 21.00     | 21.18     |
|          |                 | 16QAM      | 1       | 0         | 21.04               | 21.07     | 21.09     |
|          |                 |            | 1       | 7         | 20.84               | 21.05     | 21.48     |
|          |                 |            | 1       | 14        | 21.46               | 20.90     | 21.10     |
|          |                 |            | 8       | 0         | 20.36               | 20.99     | 20.39     |
|          |                 |            | 8       | 4         | 20.32               | 20.39     | 20.36     |
|          |                 |            | 8       | 7         | 20.34               | 20.37     | 20.31     |
|          |                 |            | 15      | 0         | 20.31               | 20.32     | 20.34     |
| LTE Band | Bandwidth (MHz) | Modulation | RB Size | RB Offset | Average Power (dBm) |           |           |
|          |                 |            |         |           | 18625               | 18900     | 19175     |
|          |                 |            |         |           | 1852.5MHz           | 1880.0MHz | 1907.5MHz |
| 2        | 5               | QPSK       | 1       | 0         | 22.00               | 21.95     | 22.04     |
|          |                 |            | 1       | 12        | 21.93               | 21.99     | 22.01     |
|          |                 |            | 1       | 24        | 21.90               | 21.91     | 21.97     |
|          |                 |            | 12      | 0         | 21.09               | 21.09     | 21.17     |
|          |                 |            | 12      | 6         | 21.07               | 21.08     | 21.11     |
|          |                 |            | 12      | 11        | 21.05               | 21.09     | 21.10     |
|          |                 |            | 25      | 0         | 21.02               | 21.04     | 21.16     |
|          |                 | 16QAM      | 1       | 0         | 20.99               | 21.10     | 21.42     |
|          |                 |            | 1       | 12        | 21.09               | 21.16     | 21.52     |
|          |                 |            | 1       | 24        | 21.44               | 21.06     | 21.11     |
|          |                 |            | 12      | 0         | 20.32               | 20.34     | 20.31     |
|          |                 |            | 12      | 6         | 20.36               | 20.32     | 20.36     |
|          |                 |            | 12      | 11        | 20.34               | 20.33     | 20.37     |
|          |                 |            | 25      | 0         | 20.35               | 20.34     | 20.31     |

| LTE Band | Bandwidth (MHz) | Modulation | RB Size | RB Offset | Average Power (dBm) |           |           |
|----------|-----------------|------------|---------|-----------|---------------------|-----------|-----------|
|          |                 |            |         |           | 18650               | 18900     | 19150     |
|          |                 |            |         |           | 1855.0MHz           | 1880.0MHz | 1905.0MHz |
| 2        | 10              | QPSK       | 1       | 0         | 22.04               | 21.98     | 22.12     |
|          |                 |            | 1       | 24        | 21.91               | 21.90     | 22.01     |
|          |                 |            | 1       | 49        | 21.92               | 21.94     | 21.99     |
|          |                 |            | 25      | 0         | 21.07               | 21.04     | 21.21     |
|          |                 |            | 25      | 12        | 21.04               | 21.08     | 21.18     |
|          |                 |            | 25      | 24        | 21.04               | 21.05     | 21.16     |
|          |                 |            | 50      | 0         | 21.06               | 21.09     | 21.14     |
|          |                 | 16QAM      | 1       | 0         | 21.28               | 21.47     | 21.47     |
|          |                 |            | 1       | 24        | 21.13               | 21.12     | 21.46     |
|          |                 |            | 1       | 49        | 21.13               | 21.12     | 21.16     |
|          |                 |            | 25      | 0         | 20.31               | 20.35     | 20.33     |
|          |                 |            | 25      | 12        | 20.39               | 20.34     | 20.38     |
|          |                 |            | 25      | 24        | 20.34               | 20.35     | 20.34     |
|          |                 |            | 50      | 0         | 20.32               | 20.39     | 20.36     |
| LTE Band | Bandwidth (MHz) | Modulation | RB Size | RB Offset | Average Power (dBm) |           |           |
|          |                 |            |         |           | 18675               | 18900     | 19125     |
|          |                 |            |         |           | 1857.5MHz           | 1880.0MHz | 1902.5MHz |
| 2        | 15              | QPSK       | 1       | 0         | 22.05               | 21.98     | 22.08     |
|          |                 |            | 1       | 37        | 21.95               | 21.93     | 22.07     |
|          |                 |            | 1       | 74        | 21.99               | 21.98     | 22.08     |
|          |                 |            | 36      | 0         | 21.09               | 21.14     | 21.19     |
|          |                 |            | 36      | 16        | 21.07               | 21.15     | 21.20     |
|          |                 |            | 36      | 35        | 21.08               | 21.13     | 21.13     |
|          |                 |            | 75      | 0         | 21.08               | 21.08     | 21.17     |
|          |                 | 16QAM      | 1       | 0         | 21.26               | 21.27     | 20.93     |
|          |                 |            | 1       | 37        | 21.40               | 21.38     | 21.36     |
|          |                 |            | 1       | 74        | 21.21               | 21.21     | 21.01     |
|          |                 |            | 36      | 0         | 20.38               | 20.09     | 20.33     |
|          |                 |            | 36      | 16        | 20.37               | 20.38     | 20.32     |
|          |                 |            | 36      | 35        | 20.33               | 20.37     | 20.37     |
|          |                 |            | 75      | 0         | 20.34               | 20.34     | 20.38     |
| LTE Band | Bandwidth (MHz) | Modulation | RB Size | RB Offset | Average Power (dBm) |           |           |
|          |                 |            |         |           | 18700               | 18900     | 19100     |
|          |                 |            |         |           | 1860.0MHz           | 1880.0MHz | 1900.0MHz |
| 2        | 20              | QPSK       | 1       | 0         | 22.07               | 22.05     | 22.13     |
|          |                 |            | 1       | 49        | 21.87               | 21.92     | 22.00     |
|          |                 |            | 1       | 99        | 21.96               | 22.00     | 22.06     |
|          |                 |            | 50      | 0         | 21.11               | 21.09     | 21.22     |
|          |                 |            | 50      | 24        | 21.06               | 21.13     | 21.14     |
|          |                 |            | 50      | 49        | 21.11               | 21.11     | 21.24     |
|          |                 |            | 100     | 0         | 21.08               | 21.07     | 21.20     |
|          |                 | 16QAM      | 1       | 0         | 21.39               | 21.03     | 20.98     |
|          |                 |            | 1       | 49        | 21.23               | 21.62     | 20.78     |
|          |                 |            | 1       | 99        | 20.95               | 20.83     | 21.05     |
|          |                 |            | 50      | 0         | 20.33               | 20.47     | 20.38     |
|          |                 |            | 50      | 24        | 20.38               | 20.34     | 20.35     |
|          |                 |            | 50      | 49        | 20.31               | 20.34     | 20.35     |
|          |                 |            | 100     | 0         | 20.37               | 20.38     | 20.36     |

| LTE Band | Bandwidth (MHz) | Modulation | RB Size | RB Offset | Average Power (dBm) |           |           |
|----------|-----------------|------------|---------|-----------|---------------------|-----------|-----------|
|          |                 |            |         |           | 19957               | 20175     | 20393     |
|          |                 |            |         |           | 1710.7MHz           | 1732.5MHz | 1754.3MHz |
| 4        | 1.4             | QPSK       | 1       | 0         | 22.11               | 22.11     | 22.01     |
|          |                 |            | 1       | 2         | 22.00               | 21.99     | 22.00     |
|          |                 |            | 1       | 5         | 21.97               | 22.07     | 21.97     |
|          |                 |            | 3       | 0         | 21.09               | 21.14     | 21.13     |
|          |                 |            | 3       | 1         | 21.06               | 21.06     | 21.08     |
|          |                 |            | 3       | 2         | 21.15               | 21.10     | 21.13     |
|          |                 |            | 6       | 0         | 21.10               | 21.13     | 21.07     |
|          |                 | 16QAM      | 1       | 0         | 21.46               | 21.17     | 21.09     |
|          |                 |            | 1       | 2         | 21.05               | 21.07     | 21.16     |
|          |                 |            | 1       | 5         | 21.11               | 21.11     | 21.07     |
|          |                 |            | 3       | 0         | 21.13               | 21.40     | 21.17     |
|          |                 |            | 3       | 1         | 20.86               | 21.01     | 20.96     |
|          |                 |            | 3       | 2         | 21.18               | 20.97     | 21.00     |
|          |                 |            | 6       | 0         | 20.46               | 20.34     | 20.45     |
| LTE Band | Bandwidth (MHz) | Modulation | RB Size | RB Offset | Average Power (dBm) |           |           |
|          |                 |            |         |           | 19965               | 20175     | 20385     |
|          |                 |            |         |           | 1711.5MHz           | 1732.5MHz | 1753.5MHz |
| 4        | 3               | QPSK       | 1       | 0         | 22.10               | 22.07     | 22.00     |
|          |                 |            | 1       | 7         | 22.07               | 22.11     | 22.05     |
|          |                 |            | 1       | 14        | 22.00               | 22.00     | 21.97     |
|          |                 |            | 8       | 0         | 21.10               | 21.14     | 21.11     |
|          |                 |            | 8       | 4         | 21.09               | 21.13     | 21.07     |
|          |                 |            | 8       | 7         | 21.08               | 21.12     | 21.09     |
|          |                 |            | 15      | 0         | 21.17               | 21.10     | 21.09     |
|          |                 | 16QAM      | 1       | 0         | 21.39               | 21.19     | 21.45     |
|          |                 |            | 1       | 7         | 21.50               | 21.55     | 21.44     |
|          |                 |            | 1       | 14        | 21.44               | 21.12     | 21.10     |
|          |                 |            | 8       | 0         | 20.61               | 20.68     | 20.63     |
|          |                 |            | 8       | 4         | 20.52               | 20.55     | 20.53     |
|          |                 |            | 8       | 7         | 20.46               | 20.46     | 20.45     |
|          |                 |            | 15      | 0         | 20.35               | 20.32     | 20.34     |
| LTE Band | Bandwidth (MHz) | Modulation | RB Size | RB Offset | Average Power (dBm) |           |           |
|          |                 |            |         |           | 19975               | 20175     | 20375     |
|          |                 |            |         |           | 1712.5MHz           | 1732.5MHz | 1752.5MHz |
| 4        | 5               | QPSK       | 1       | 0         | 22.10               | 22.19     | 22.05     |
|          |                 |            | 1       | 12        | 22.12               | 22.14     | 22.07     |
|          |                 |            | 1       | 24        | 22.01               | 22.03     | 22.01     |
|          |                 |            | 12      | 0         | 21.17               | 21.18     | 21.13     |
|          |                 |            | 12      | 6         | 21.16               | 21.17     | 21.10     |
|          |                 |            | 12      | 11        | 21.12               | 21.13     | 21.08     |
|          |                 |            | 25      | 0         | 21.10               | 21.10     | 21.07     |
|          |                 | 16QAM      | 1       | 0         | 21.16               | 21.28     | 21.13     |
|          |                 |            | 1       | 12        | 21.17               | 21.58     | 21.27     |
|          |                 |            | 1       | 24        | 21.48               | 21.18     | 20.83     |
|          |                 |            | 12      | 0         | 20.68               | 20.60     | 20.61     |
|          |                 |            | 12      | 6         | 20.61               | 20.56     | 20.60     |
|          |                 |            | 12      | 11        | 20.58               | 20.46     | 20.57     |
|          |                 |            | 25      | 0         | 20.38               | 20.32     | 20.44     |

| LTE Band | Bandwidth (MHz) | Modulation | RB Size | RB Offset | Average Power (dBm) |           |           |
|----------|-----------------|------------|---------|-----------|---------------------|-----------|-----------|
|          |                 |            |         |           | 20000               | 20175     | 20350     |
|          |                 |            |         |           | 1715.0MHz           | 1732.5MHz | 1750.0MHz |
| 4        | 10              | QPSK       | 1       | 0         | 22.17               | 22.16     | 22.10     |
|          |                 |            | 1       | 24        | 22.10               | 22.06     | 21.97     |
|          |                 |            | 1       | 49        | 22.09               | 22.10     | 22.06     |
|          |                 |            | 25      | 0         | 21.14               | 21.13     | 21.15     |
|          |                 |            | 25      | 12        | 21.12               | 21.10     | 21.08     |
|          |                 |            | 25      | 24        | 21.08               | 21.12     | 21.04     |
|          |                 |            | 50      | 0         | 21.17               | 21.14     | 21.12     |
|          |                 | 16QAM      | 1       | 0         | 21.22               | 21.34     | 21.17     |
|          |                 |            | 1       | 24        | 21.45               | 20.96     | 21.14     |
|          |                 |            | 1       | 49        | 21.16               | 21.45     | 21.07     |
|          |                 |            | 25      | 0         | 20.63               | 20.62     | 20.62     |
|          |                 |            | 25      | 12        | 20.61               | 20.55     | 20.56     |
|          |                 |            | 25      | 24        | 20.52               | 20.52     | 20.54     |
|          |                 |            | 50      | 0         | 20.40               | 20.42     | 20.41     |
| LTE Band | Bandwidth (MHz) | Modulation | RB Size | RB Offset | Average Power (dBm) |           |           |
|          |                 |            |         |           | 20025               | 20175     | 20325     |
|          |                 |            |         |           | 1717.5MHz           | 1732.5MHz | 1747.5MHz |
| 4        | 15              | QPSK       | 1       | 0         | 22.22               | 22.19     | 22.22     |
|          |                 |            | 1       | 37        | 22.08               | 22.09     | 22.17     |
|          |                 |            | 1       | 74        | 22.07               | 22.08     | 22.02     |
|          |                 |            | 36      | 0         | 21.21               | 21.21     | 22.01     |
|          |                 |            | 36      | 16        | 21.12               | 21.14     | 21.17     |
|          |                 |            | 36      | 35        | 21.10               | 21.16     | 21.12     |
|          |                 |            | 75      | 0         | 21.15               | 21.13     | 21.05     |
|          |                 | 16QAM      | 1       | 0         | 21.42               | 21.13     | 21.10     |
|          |                 |            | 1       | 37        | 21.75               | 21.05     | 20.90     |
|          |                 |            | 1       | 74        | 21.38               | 21.65     | 21.68     |
|          |                 |            | 36      | 0         | 20.58               | 20.52     | 20.89     |
|          |                 |            | 36      | 16        | 20.56               | 20.48     | 20.69     |
|          |                 |            | 36      | 35        | 20.46               | 20.49     | 20.52     |
|          |                 |            | 75      | 0         | 20.35               | 20.36     | 20.49     |
| LTE Band | Bandwidth (MHz) | Modulation | RB Size | RB Offset | Average Power (dBm) |           |           |
|          |                 |            |         |           | 20050               | 20175     | 20300     |
|          |                 |            |         |           | 1720.0MHz           | 1732.5MHz | 1745.0MHz |
| 4        | 20              | QPSK       | 1       | 0         | 22.24               | 22.25     | 22.24     |
|          |                 |            | 1       | 49        | 22.08               | 22.03     | 21.99     |
|          |                 |            | 1       | 99        | 22.06               | 22.05     | 22.00     |
|          |                 |            | 50      | 0         | 21.15               | 21.20     | 21.20     |
|          |                 |            | 50      | 24        | 21.10               | 21.12     | 21.09     |
|          |                 |            | 50      | 49        | 21.07               | 21.07     | 21.04     |
|          |                 |            | 100     | 0         | 21.10               | 21.13     | 21.12     |
|          |                 | 16QAM      | 1       | 0         | 20.89               | 21.31     | 21.38     |
|          |                 |            | 1       | 49        | 21.69               | 21.69     | 21.61     |
|          |                 |            | 1       | 99        | 21.24               | 21.57     | 21.14     |
|          |                 |            | 50      | 0         | 20.70               | 20.68     | 20.66     |
|          |                 |            | 50      | 24        | 20.61               | 20.63     | 20.55     |
|          |                 |            | 50      | 49        | 20.60               | 20.47     | 20.45     |
|          |                 |            | 100     | 0         | 20.42               | 20.44     | 20.44     |

| LTE Band | Bandwidth (MHz) | Modulation | RB Size | RB Offset | Average Power (dBm) |          |          |
|----------|-----------------|------------|---------|-----------|---------------------|----------|----------|
|          |                 |            |         |           | 20407               | 20525    | 20643    |
|          |                 |            |         |           | 824.7MHz            | 836.5MHz | 848.3MHz |
| 5        | 1.4             | QPSK       | 1       | 0         | 22.41               | 22.34    | 22.51    |
|          |                 |            | 1       | 2         | 22.42               | 22.33    | 22.51    |
|          |                 |            | 1       | 5         | 22.44               | 22.35    | 22.55    |
|          |                 |            | 3       | 0         | 21.52               | 21.45    | 21.65    |
|          |                 |            | 3       | 1         | 21.47               | 21.35    | 21.56    |
|          |                 |            | 3       | 2         | 21.51               | 21.41    | 21.59    |
|          |                 |            | 6       | 0         | 21.53               | 21.47    | 21.54    |
|          |                 | 16QAM      | 1       | 0         | 21.61               | 21.50    | 22.03    |
|          |                 |            | 1       | 2         | 21.58               | 21.54    | 21.38    |
|          |                 |            | 1       | 5         | 21.61               | 21.84    | 21.42    |
|          |                 |            | 3       | 0         | 21.80               | 21.52    | 21.66    |
|          |                 |            | 3       | 1         | 21.59               | 21.41    | 21.47    |
|          |                 |            | 3       | 2         | 21.48               | 21.42    | 21.63    |
|          |                 |            | 6       | 0         | 20.63               | 20.49    | 20.59    |
|          |                 |            |         |           |                     |          |          |
| LTE Band | Bandwidth (MHz) | Modulation | RB Size | RB Offset | Average Power (dBm) |          |          |
|          |                 |            |         |           | 20415               | 20525    | 20635    |
|          |                 |            |         |           | 825.5MHz            | 836.5MHz | 847.5MHz |
| 5        | 3               | QPSK       | 1       | 0         | 22.35               | 22.29    | 22.52    |
|          |                 |            | 1       | 7         | 22.42               | 22.35    | 22.56    |
|          |                 |            | 1       | 14        | 22.34               | 22.27    | 22.43    |
|          |                 |            | 8       | 0         | 21.55               | 21.49    | 21.57    |
|          |                 |            | 8       | 4         | 21.54               | 21.78    | 21.56    |
|          |                 |            | 8       | 7         | 21.51               | 21.46    | 21.54    |
|          |                 |            | 15      | 0         | 21.56               | 21.48    | 21.56    |
|          |                 | 16QAM      | 1       | 0         | 21.57               | 21.49    | 21.66    |
|          |                 |            | 1       | 7         | 21.91               | 21.58    | 22.01    |
|          |                 |            | 1       | 14        | 21.57               | 21.81    | 21.50    |
|          |                 |            | 8       | 0         | 20.53               | 20.43    | 20.57    |
|          |                 |            | 8       | 4         | 20.49               | 20.48    | 20.64    |
|          |                 |            | 8       | 7         | 20.48               | 20.45    | 20.52    |
|          |                 |            | 15      | 0         | 20.58               | 20.43    | 20.55    |
|          |                 |            |         |           |                     |          |          |
| LTE Band | Bandwidth (MHz) | Modulation | RB Size | RB Offset | Average Power (dBm) |          |          |
|          |                 |            |         |           | 20425               | 20525    | 20625    |
|          |                 |            |         |           | 826.5MHz            | 836.5MHz | 846.5MHz |
| 5        | 5               | QPSK       | 1       | 0         | 22.47               | 22.40    | 22.55    |
|          |                 |            | 1       | 12        | 22.44               | 22.40    | 22.59    |
|          |                 |            | 1       | 24        | 22.41               | 22.39    | 22.48    |
|          |                 |            | 12      | 0         | 21.59               | 21.50    | 21.59    |
|          |                 |            | 12      | 6         | 21.57               | 21.52    | 21.58    |
|          |                 |            | 12      | 11        | 21.57               | 21.44    | 21.58    |
|          |                 |            | 25      | 0         | 21.53               | 21.43    | 21.52    |
|          |                 | 16QAM      | 1       | 0         | 21.43               | 21.44    | 22.00    |
|          |                 |            | 1       | 12        | 21.31               | 21.46    | 21.64    |
|          |                 |            | 1       | 24        | 21.53               | 21.44    | 21.62    |
|          |                 |            | 12      | 0         | 20.63               | 20.53    | 20.61    |
|          |                 |            | 12      | 6         | 20.52               | 20.51    | 20.67    |
|          |                 |            | 12      | 11        | 20.48               | 20.47    | 20.51    |
|          |                 |            | 25      | 0         | 20.49               | 20.54    | 20.55    |

| LTE Band | Bandwidth (MHz) | Modulation | RB Size | RB Offset | Average Power (dBm) |          |        |
|----------|-----------------|------------|---------|-----------|---------------------|----------|--------|
|          |                 |            |         |           | 20450               | 20525    | 20600  |
|          |                 |            |         |           | 829MHz              | 836.5MHz | 844MHz |
| 5        | 10              | QPSK       | 1       | 0         | 22.50               | 22.45    | 22.49  |
|          |                 |            | 1       | 24        | 22.42               | 22.32    | 22.55  |
|          |                 |            | 1       | 49        | 22.46               | 22.50    | 22.53  |
|          |                 |            | 25      | 0         | 21.57               | 21.50    | 21.51  |
|          |                 |            | 25      | 12        | 21.56               | 21.46    | 21.55  |
|          |                 |            | 25      | 24        | 21.53               | 21.46    | 21.53  |
|          |                 |            | 50      | 0         | 21.57               | 21.51    | 21.55  |
|          |                 | 16QAM      | 1       | 0         | 21.44               | 21.44    | 21.60  |
|          |                 |            | 1       | 24        | 21.59               | 21.21    | 21.57  |
|          |                 |            | 1       | 49        | 21.59               | 21.31    | 21.90  |
|          |                 |            | 25      | 0         | 20.48               | 20.57    | 20.48  |
|          |                 |            | 25      | 12        | 20.55               | 20.50    | 20.57  |
|          |                 |            | 25      | 24        | 20.51               | 20.45    | 20.59  |
|          |                 |            | 50      | 0         | 20.54               | 20.54    | 20.50  |

| LTE Band | Bandwidth (MHz) | Modulation | RB Size | RB Offset | Average Power (dBm) |           |           |
|----------|-----------------|------------|---------|-----------|---------------------|-----------|-----------|
|          |                 |            |         |           | 20775               | 21100     | 21425     |
|          |                 |            |         |           | 2502.5MHz           | 2535.0MHz | 2567.5MHz |
| 7        | 5               | QPSK       | 1       | 0         | 22.10               | 22.19     | 22.29     |
|          |                 |            | 1       | 12        | 22.03               | 22.11     | 22.32     |
|          |                 |            | 1       | 24        | 22.07               | 22.26     | 22.21     |
|          |                 |            | 12      | 0         | 21.10               | 21.43     | 21.40     |
|          |                 |            | 12      | 6         | 21.14               | 21.40     | 21.49     |
|          |                 |            | 12      | 11        | 21.11               | 21.40     | 21.49     |
|          |                 |            | 25      | 0         | 21.17               | 21.39     | 21.41     |
|          |                 | 16QAM      | 1       | 0         | 21.00               | 21.40     | 21.67     |
|          |                 |            | 1       | 12        | 20.92               | 21.45     | 21.43     |
|          |                 |            | 1       | 24        | 20.95               | 21.39     | 21.20     |
|          |                 |            | 12      | 0         | 20.67               | 20.39     | 20.40     |
|          |                 |            | 12      | 6         | 20.62               | 20.40     | 20.34     |
|          |                 |            | 12      | 11        | 20.62               | 20.38     | 20.35     |
|          |                 |            | 25      | 0         | 20.63               | 20.38     | 20.39     |

| LTE Band | Bandwidth (MHz) | Modulation | RB Size | RB Offset | Average Power (dBm) |           |           |
|----------|-----------------|------------|---------|-----------|---------------------|-----------|-----------|
|          |                 |            |         |           | 20800               | 21100     | 21400     |
|          |                 |            |         |           | 2505.0MHz           | 2535.0MHz | 2565.0MHz |
| 7        | 10              | QPSK       | 1       | 0         | 22.15               | 22.10     | 22.33     |
|          |                 |            | 1       | 24        | 22.18               | 22.22     | 22.41     |
|          |                 |            | 1       | 49        | 22.24               | 22.21     | 22.35     |
|          |                 |            | 25      | 0         | 21.34               | 21.33     | 21.39     |
|          |                 |            | 25      | 12        | 21.35               | 21.38     | 21.42     |
|          |                 |            | 25      | 24        | 21.37               | 21.37     | 21.33     |
|          |                 |            | 50      | 0         | 21.41               | 21.34     | 21.44     |
|          |                 | 16QAM      | 1       | 0         | 21.33               | 21.40     | 21.42     |
|          |                 |            | 1       | 24        | 21.10               | 21.38     | 21.21     |
|          |                 |            | 1       | 49        | 21.38               | 21.43     | 21.44     |
|          |                 |            | 25      | 0         | 20.31               | 20.42     | 20.43     |
|          |                 |            | 25      | 12        | 20.32               | 20.39     | 20.39     |
|          |                 |            | 25      | 24        | 20.40               | 20.41     | 20.46     |
|          |                 |            | 50      | 0         | 20.41               | 20.36     | 20.40     |

| LTE Band | Bandwidth (MHz) | Modulation | RB Size | RB Offset | Average Power (dBm) |           |           |
|----------|-----------------|------------|---------|-----------|---------------------|-----------|-----------|
|          |                 |            |         |           | 20825               | 21100     | 21375     |
|          |                 |            |         |           | 2507.5MHz           | 2535.0MHz | 2562.5MHz |
| 7        | 15              | QPSK       | 1       | 0         | 22.20               | 22.23     | 22.26     |
|          |                 |            | 1       | 37        | 22.22               | 22.26     | 22.27     |
|          |                 |            | 1       | 74        | 22.29               | 22.32     | 22.41     |
|          |                 |            | 36      | 0         | 21.35               | 21.38     | 21.45     |
|          |                 |            | 36      | 16        | 21.37               | 21.39     | 21.40     |
|          |                 |            | 36      | 35        | 21.46               | 21.40     | 21.35     |
|          |                 |            | 75      | 0         | 21.36               | 21.40     | 21.30     |
|          |                 | 16QAM      | 1       | 0         | 21.49               | 21.83     | 21.18     |
|          |                 |            | 1       | 37        | 21.56               | 21.81     | 21.43     |
|          |                 |            | 1       | 74        | 21.21               | 21.90     | 21.09     |
|          |                 |            | 36      | 0         | 20.39               | 20.38     | 20.40     |
|          |                 |            | 36      | 16        | 20.39               | 20.37     | 20.39     |
|          |                 |            | 36      | 35        | 20.38               | 20.40     | 20.40     |
|          |                 |            | 75      | 0         | 20.31               | 20.35     | 20.42     |
| LTE Band | Bandwidth (MHz) | Modulation | RB Size | RB Offset | Average Power (dBm) |           |           |
|          |                 |            |         |           | 20850               | 21100     | 21350     |
|          |                 |            |         |           | 2510.0MHz           | 2535.0MHz | 2560.0MHz |
| 7        | 20              | QPSK       | 1       | 0         | 22.13               | 22.24     | 22.27     |
|          |                 |            | 1       | 49        | 22.18               | 22.22     | 22.30     |
|          |                 |            | 1       | 99        | 22.28               | 22.29     | 22.40     |
|          |                 |            | 50      | 0         | 21.32               | 21.26     | 21.46     |
|          |                 |            | 50      | 24        | 21.38               | 21.37     | 21.45     |
|          |                 |            | 50      | 49        | 21.38               | 21.38     | 21.39     |
|          |                 |            | 100     | 0         | 21.39               | 21.27     | 21.42     |
|          |                 | 16QAM      | 1       | 0         | 21.80               | 21.32     | 21.21     |
|          |                 |            | 1       | 49        | 21.16               | 21.35     | 21.36     |
|          |                 |            | 1       | 99        | 21.00               | 21.42     | 21.44     |
|          |                 |            | 50      | 0         | 20.31               | 20.32     | 20.39     |
|          |                 |            | 50      | 24        | 20.33               | 20.35     | 20.36     |
|          |                 |            | 50      | 49        | 20.35               | 20.34     | 20.43     |
|          |                 |            | 100     | 0         | 20.33               | 20.33     | 20.39     |

| LTE Band | Bandwidth (MHz) | Modulation | RB Size | RB Offset | Average Power (dBm) |          |          |
|----------|-----------------|------------|---------|-----------|---------------------|----------|----------|
|          |                 |            |         |           | 23017               | 23095    | 23175    |
|          |                 |            |         |           | 699.7MHz            | 707.5MHz | 715.3MHz |
| 12       | 1.4             | QPSK       | 1       | 0         | 22.12               | 22.19    | 22.23    |
|          |                 |            | 1       | 2         | 22.10               | 22.21    | 22.15    |
|          |                 |            | 1       | 5         | 22.18               | 22.18    | 22.11    |
|          |                 |            | 3       | 0         | 21.27               | 21.28    | 21.24    |
|          |                 |            | 3       | 1         | 21.22               | 21.16    | 21.20    |
|          |                 |            | 3       | 2         | 21.19               | 21.24    | 21.26    |
|          |                 |            | 6       | 0         | 21.22               | 21.17    | 21.27    |
|          |                 | 16QAM      | 1       | 0         | 21.31               | 21.36    | 21.26    |
|          |                 |            | 1       | 2         | 21.62               | 21.33    | 21.59    |
|          |                 |            | 1       | 5         | 21.35               | 21.28    | 21.27    |
|          |                 |            | 3       | 0         | 21.08               | 21.26    | 21.11    |
|          |                 |            | 3       | 1         | 21.27               | 21.30    | 21.42    |
|          |                 |            | 3       | 2         | 21.26               | 21.37    | 21.09    |
|          |                 |            | 6       | 0         | 20.40               | 20.41    | 20.49    |
| LTE Band | Bandwidth (MHz) | Modulation | RB Size | RB Offset | Average Power (dBm) |          |          |
|          |                 |            |         |           | 23025               | 23095    | 23165    |
|          |                 |            |         |           | 700.5MHz            | 707.5MHz | 714.5MHz |
| 12       | 3               | QPSK       | 1       | 0         | 22.14               | 22.09    | 22.18    |
|          |                 |            | 1       | 7         | 22.20               | 22.23    | 22.19    |
|          |                 |            | 1       | 14        | 22.15               | 22.12    | 22.15    |
|          |                 |            | 8       | 0         | 21.18               | 21.21    | 21.22    |
|          |                 |            | 8       | 4         | 21.20               | 21.19    | 21.25    |
|          |                 |            | 8       | 7         | 21.18               | 21.24    | 21.22    |
|          |                 |            | 15      | 0         | 21.24               | 21.19    | 21.23    |
|          |                 | 16QAM      | 1       | 0         | 21.27               | 21.33    | 21.27    |
|          |                 |            | 1       | 7         | 21.35               | 21.73    | 21.34    |
|          |                 |            | 1       | 14        | 21.66               | 21.04    | 21.19    |
|          |                 |            | 8       | 0         | 20.49               | 20.47    | 20.49    |
|          |                 |            | 8       | 4         | 20.31               | 20.45    | 20.46    |
|          |                 |            | 8       | 7         | 20.40               | 20.32    | 20.39    |
|          |                 |            | 15      | 0         | 20.34               | 20.36    | 20.37    |
| LTE Band | Bandwidth (MHz) | Modulation | RB Size | RB Offset | Average Power (dBm) |          |          |
|          |                 |            |         |           | 23035               | 23095    | 23155    |
|          |                 |            |         |           | 701.5MHz            | 707.5MHz | 713.5MHz |
| 12       | 5               | QPSK       | 1       | 0         | 22.20               | 22.14    | 22.21    |
|          |                 |            | 1       | 12        | 22.20               | 22.26    | 22.25    |
|          |                 |            | 1       | 24        | 22.18               | 22.17    | 22.13    |
|          |                 |            | 12      | 0         | 21.26               | 21.25    | 21.23    |
|          |                 |            | 12      | 6         | 21.20               | 21.24    | 21.17    |
|          |                 |            | 12      | 11        | 21.26               | 21.22    | 21.25    |
|          |                 |            | 25      | 0         | 21.17               | 21.17    | 21.23    |
|          |                 | 16QAM      | 1       | 0         | 21.38               | 21.36    | 21.36    |
|          |                 |            | 1       | 12        | 21.03               | 21.33    | 21.41    |
|          |                 |            | 1       | 24        | 21.39               | 21.36    | 21.21    |
|          |                 |            | 12      | 0         | 20.32               | 20.32    | 20.32    |
|          |                 |            | 12      | 6         | 20.31               | 20.34    | 20.36    |
|          |                 |            | 12      | 11        | 20.32               | 20.37    | 20.37    |
|          |                 |            | 25      | 0         | 20.34               | 20.37    | 20.35    |

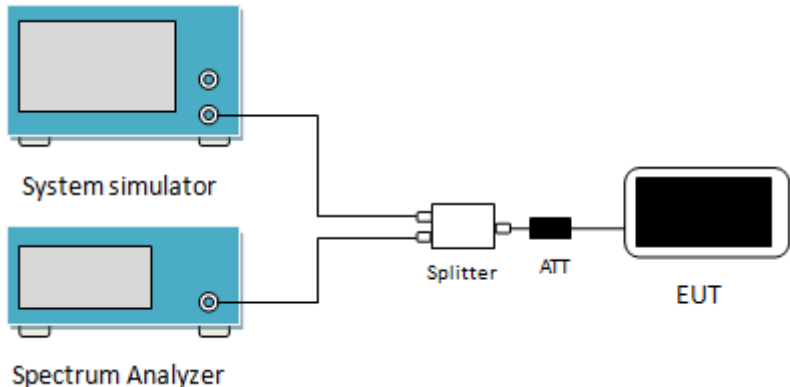


| LTE Band | Bandwidth (MHz) | Modulation | RB Size | RB Offset | Average Power (dBm) |          |          |
|----------|-----------------|------------|---------|-----------|---------------------|----------|----------|
|          |                 |            |         |           | 23060               | 23095    | 23130    |
|          |                 |            |         |           | 704.0MHz            | 707.5MHz | 711.0MHz |
| 12       | 10              | QPSK       | 1       | 0         | 22.15               | 22.17    | 22.27    |
|          |                 |            | 1       | 24        | 22.10               | 22.11    | 22.16    |
|          |                 |            | 1       | 49        | 22.24               | 22.22    | 22.20    |
|          |                 |            | 25      | 0         | 21.17               | 21.16    | 21.16    |
|          |                 |            | 25      | 12        | 21.22               | 21.20    | 21.22    |
|          |                 |            | 25      | 24        | 21.24               | 21.24    | 21.26    |
|          |                 |            | 50      | 0         | 21.23               | 21.25    | 21.23    |
|          |                 | 16QAM      | 1       | 0         | 21.65               | 21.67    | 21.43    |
|          |                 |            | 1       | 24        | 21.65               | 21.38    | 21.28    |
|          |                 |            | 1       | 49        | 21.76               | 21.17    | 21.42    |
|          |                 |            | 25      | 0         | 20.33               | 20.32    | 20.40    |
|          |                 |            | 25      | 12        | 20.36               | 20.39    | 20.37    |
|          |                 |            | 25      | 24        | 20.38               | 20.39    | 20.32    |
|          |                 |            | 50      | 0         | 20.32               | 20.35    | 20.32    |

| LTE Band | Bandwidth (MHz) | Modulation | RB Size | RB Offset | Average Power (dBm) |          |          |
|----------|-----------------|------------|---------|-----------|---------------------|----------|----------|
|          |                 |            |         |           | 23755               | 23790    | 23825    |
|          |                 |            |         |           | 706.5MHz            | 710.0MHz | 713.5MHz |
| 17       | 5               | QPSK       | 1       | 0         | 22.26               | 22.19    | 22.25    |
|          |                 |            | 1       | 12        | 22.23               | 22.17    | 22.18    |
|          |                 |            | 1       | 24        | 22.21               | 22.24    | 22.21    |
|          |                 |            | 12      | 0         | 21.24               | 21.20    | 21.21    |
|          |                 |            | 12      | 6         | 21.25               | 21.22    | 21.23    |
|          |                 |            | 12      | 11        | 21.27               | 21.24    | 21.22    |
|          |                 |            | 25      | 0         | 21.19               | 21.16    | 21.19    |
|          |                 | 16QAM      | 1       | 0         | 21.73               | 21.31    | 21.34    |
|          |                 |            | 1       | 12        | 21.80               | 21.46    | 21.73    |
|          |                 |            | 1       | 24        | 21.26               | 21.16    | 21.01    |
|          |                 |            | 12      | 0         | 20.32               | 20.32    | 20.40    |
|          |                 |            | 12      | 6         | 20.32               | 20.31    | 20.33    |
|          |                 |            | 12      | 11        | 20.36               | 20.33    | 20.31    |
|          |                 |            | 25      | 0         | 20.33               | 20.36    | 20.31    |

| LTE Band | Bandwidth (MHz) | Modulation | RB Size | RB Offset | Average Power (dBm) |          |          |
|----------|-----------------|------------|---------|-----------|---------------------|----------|----------|
|          |                 |            |         |           | 23780               | 23790    | 23800    |
|          |                 |            |         |           | 709.0MHz            | 710.0MHz | 711.0MHz |
| 17       | 10              | QPSK       | 1       | 0         | 22.22               | 22.15    | 22.26    |
|          |                 |            | 1       | 24        | 22.17               | 22.19    | 22.22    |
|          |                 |            | 1       | 49        | 22.23               | 22.18    | 22.24    |
|          |                 |            | 25      | 0         | 21.18               | 21.21    | 21.15    |
|          |                 |            | 25      | 12        | 21.20               | 21.22    | 21.22    |
|          |                 |            | 25      | 24        | 21.23               | 21.25    | 21.23    |
|          |                 |            | 50      | 0         | 21.19               | 21.21    | 21.23    |
|          |                 | 16QAM      | 1       | 0         | 21.47               | 21.43    | 21.47    |
|          |                 |            | 1       | 24        | 21.04               | 21.11    | 21.28    |
|          |                 |            | 1       | 49        | 21.35               | 21.72    | 21.71    |
|          |                 |            | 25      | 0         | 20.36               | 20.39    | 20.37    |
|          |                 |            | 25      | 12        | 20.34               | 20.33    | 20.37    |
|          |                 |            | 25      | 24        | 20.39               | 20.32    | 20.31    |
|          |                 |            | 50      | 0         | 20.36               | 20.31    | 20.33    |

## 6.2 Peak-to-Average Ratio

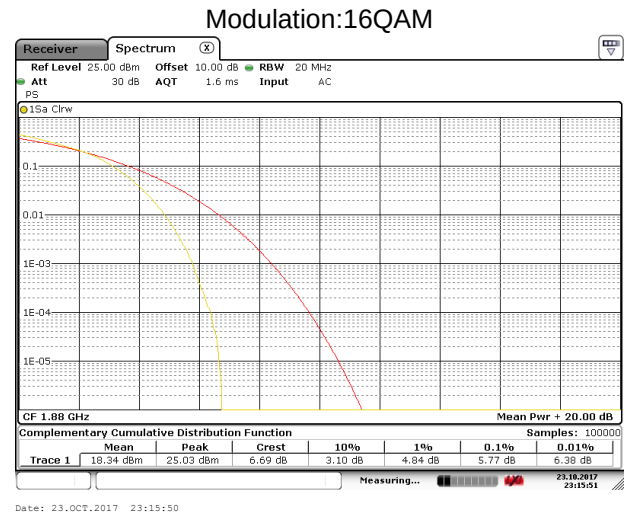
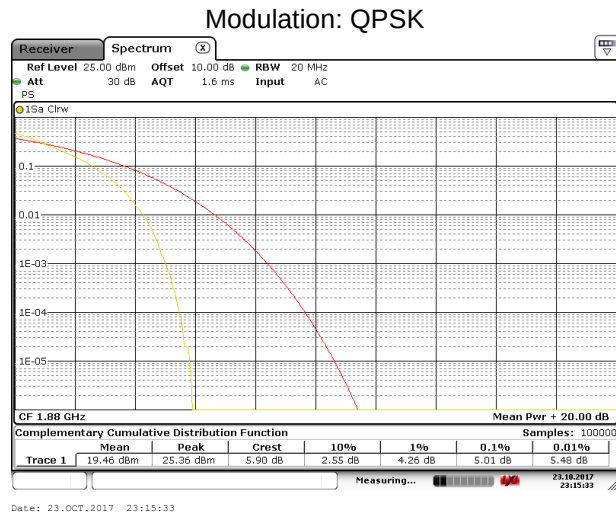
|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Requirement: | Part 24.232 (d), Part 27.50(d)(5)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Test Method:      | ANSI/TIA-603-D 2010                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Limit:            | The peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Test Setup:       |  <p>The diagram illustrates the test setup. On the left, there are two blue rectangular devices: a 'System simulator' on top and a 'Spectrum Analyzer' on the bottom. Both have a single output port. These two ports are connected to a single input port of a 'Splitter' (a small white rectangle). The other output port of the 'Splitter' is connected to an 'ATT' (Attenuator, a small black rectangle). Finally, the output of the 'ATT' is connected to the input of the 'EUT' (Equipment Under Test, a black rectangle with a screen).</p> |
| Test Procedure:   | <ol style="list-style-type: none"> <li>1 The RF output of the transceiver was connected to a spectrum analyzer through appropriate attenuation.</li> <li>2 Set the CCDF option in spectrum analyzer, <math>RBW \geq OBW</math>,</li> <li>3 Set the EUT working in highest power level, measured and recorded the 0.1% as PAPR level.</li> <li>4 Repeat step 1~3 at other frequency and modulations.</li> </ol>                                                                                                                                                                                                                       |
| Test Instruments: | Refer to section 5.8 for details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Test mode:        | Refer to section 5.3 for details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Test results:     | Passed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

**Measurement Data:**

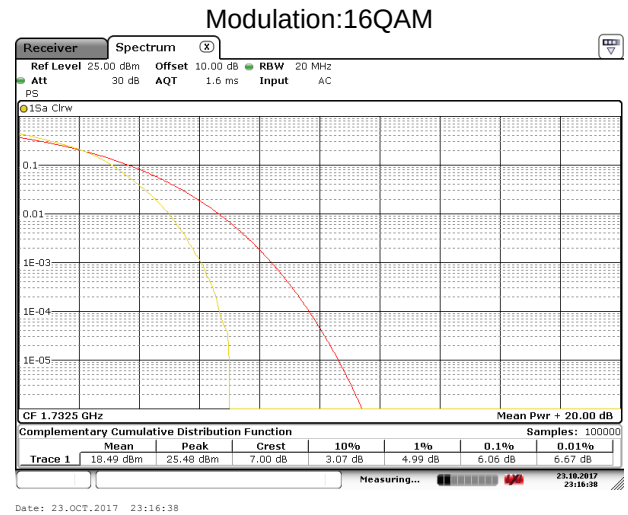
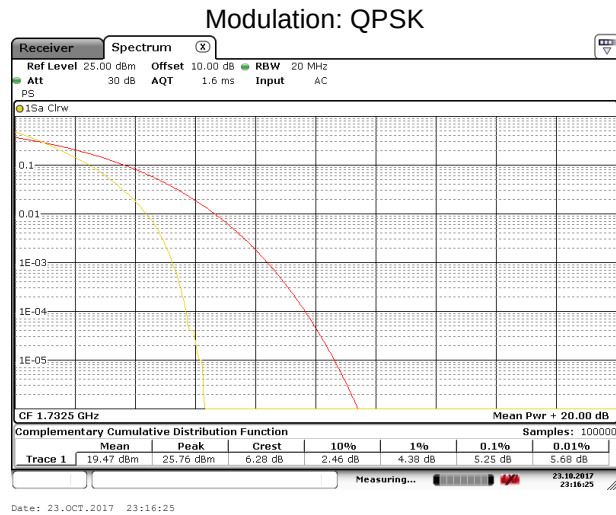
| Bandwidth                    | Modulation | RB Size | RB Offset | PAPR |
|------------------------------|------------|---------|-----------|------|
| LTE Band 2 (Middle Channel)  |            |         |           |      |
| 20MHz                        | QPSK       | 100     | 0         | 5.01 |
|                              | 16QAM      | 100     | 0         | 5.77 |
| LTE Band 4 (Middle Channel)  |            |         |           |      |
| 20MHz                        | QPSK       | 100     | 0         | 5.25 |
|                              | 16QAM      | 100     | 0         | 6.06 |
| LTE Band 5 (Middle Channel)  |            |         |           |      |
| 10MHz                        | QPSK       | 100     | 0         | 5.25 |
|                              | 16QAM      | 100     | 0         | 5.91 |
| LTE Band 7 (Middle Channel)  |            |         |           |      |
| 20MHz                        | QPSK       | 100     | 0         | 5.07 |
|                              | 16QAM      | 100     | 0         | 5.71 |
| LTE Band 12 (Middle Channel) |            |         |           |      |
| 10MHz                        | QPSK       | 100     | 0         | 5.51 |
|                              | 16QAM      | 100     | 0         | 6.43 |
| LTE Band 17 (Middle Channel) |            |         |           |      |
| 10MHz                        | QPSK       | 50      | 0         | 5.74 |
|                              | 16QAM      | 50      | 0         | 6.58 |

Test plots as below:

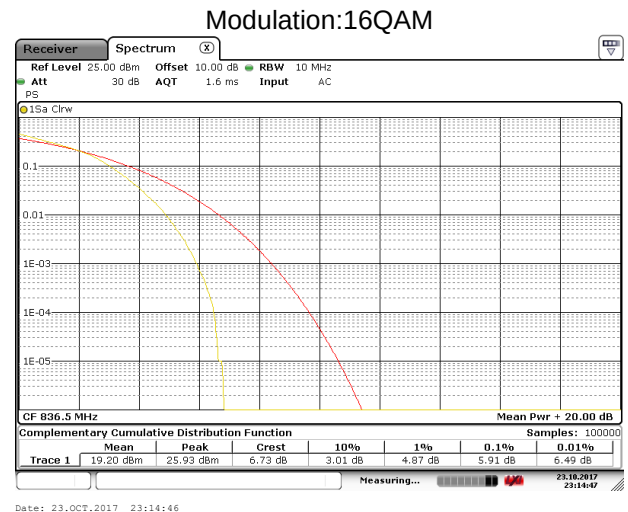
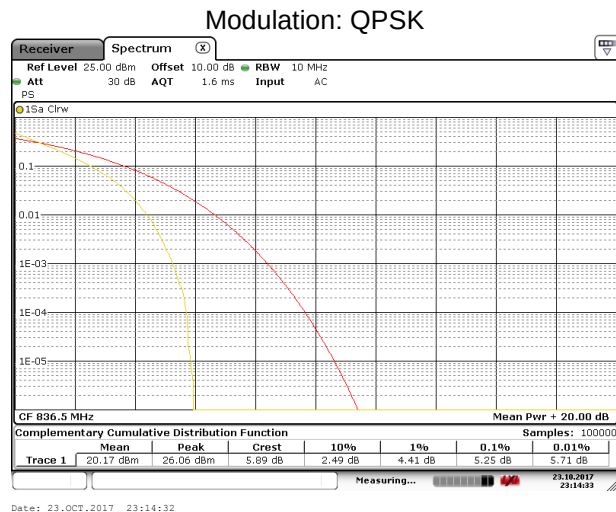
## LTE Band 2 Middle channel



## LTE Band 4 Middle channel

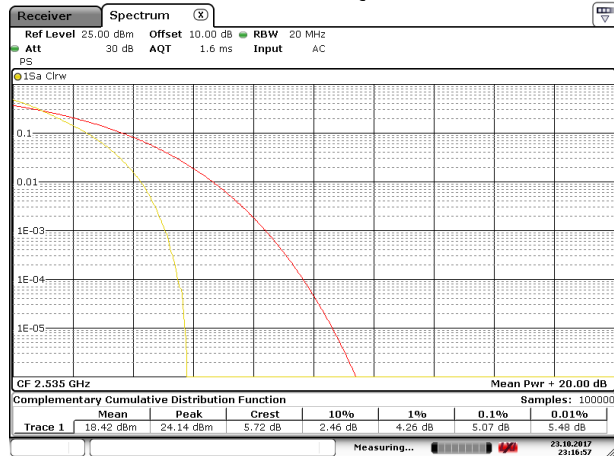


## LTE Band 5 Middle channel



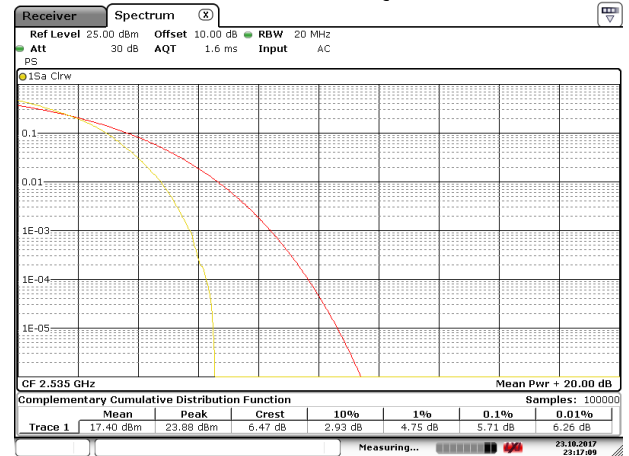
## LTE Band 7 Middle channel

Modulation: QPSK



Date: 23.OCT.2017 23:16:56

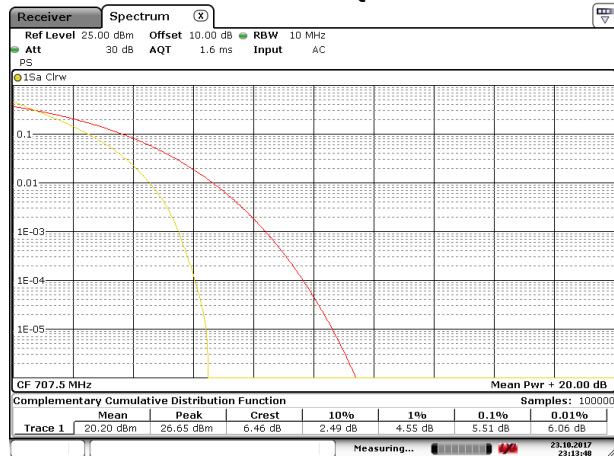
Modulation:16QAM



Date: 23.OCT.2017 23:17:09

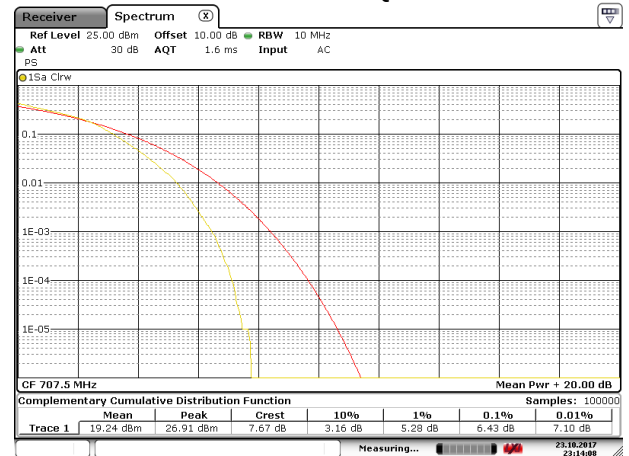
## LTE Band 12 Middle channel

Modulation: QPSK



Date: 23.OCT.2017 23:13:47

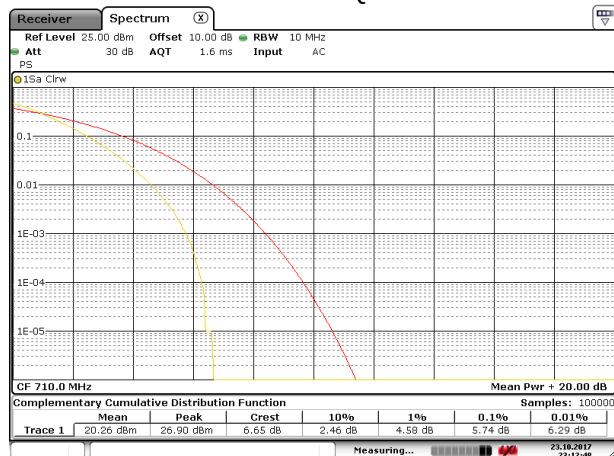
Modulation:16QAM



Date: 23.OCT.2017 23:14:08

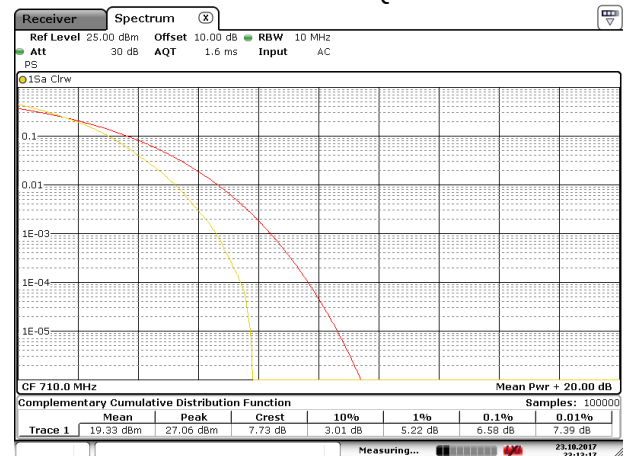
## LTE Band 17 Middle channel

Modulation: QPSK



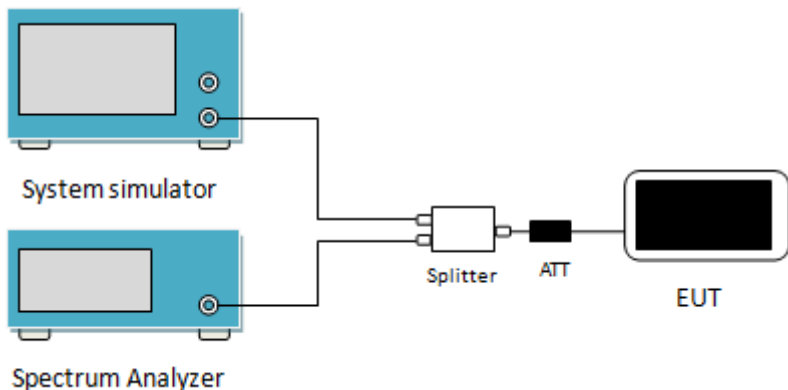
Date: 23.OCT.2017 23:12:47

Modulation:16QAM



Date: 23.OCT.2017 23:13:17

## 6.3 Occupy Bandwidth

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Requirement: | FCC Part 22.917(b), Part 24.238,part 27.53(g),part 27.53(h), Part 27.53(m)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Test Method:      | ANSI/TIA-603-D 2010                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Test Setup:       |  <p>The diagram illustrates the test setup. On the left, there are two blue rectangular units: the top one is labeled 'System simulator' and the bottom one is labeled 'Spectrum Analyzer'. A cable connects the output of the System simulator to the input of the Spectrum Analyzer. From the output of the Spectrum Analyzer, a cable leads to a 'Splitter' (a small white box with two ports). From the other port of the Splitter, a cable goes to an 'ATT' (attenuator, a small black box). Finally, a cable connects the ATT to the 'EUT' (Equipment Under Test, represented by a black rectangle with rounded corners).</p> |
| Test Procedure:   | <ol style="list-style-type: none"> <li>1. The EUT's output RF connector was connected with a short cable to the spectrum analyzer</li> <li>2. RBW was set to about 1% ~ 5% of emission BW, VBW= 3 times RBW.</li> <li>3. -26dBc display line was placed on the screen (or 99% bandwidth), the occupied bandwidth is the delta frequency between the two points where the display line intersects the signal trace.</li> </ol>                                                                                                                                                                                                                                                                                         |
| Test Instruments: | Refer to section 5.8 for details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Test mode:        | Refer to section 5.3 for details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Test results:     | Passed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

**Measurement Data:**

**LTE Band 2 part:**

| Bandwidth | Channel | Frequency(MHz) | Modulation | 99% OBW (kHz) | -26dBcEBW (kHz) |
|-----------|---------|----------------|------------|---------------|-----------------|
| 1.4MHz    | 18607   | 1850.70        | 16QAM      | 1086          | 1248            |
|           |         |                | QPSK       | 1104          | 1272            |
|           | 18900   | 1880.00        | 16QAM      | 1098          | 1260            |
|           |         |                | QPSK       | 1098          | 1266            |
|           | 19193   | 1909.30        | 16QAM      | 1092          | 1272            |
|           |         |                | QPSK       | 1098          | 1260            |
| 3MHz      | 18615   | 1851.50        | 16QAM      | 2724          | 2988            |
|           |         |                | QPSK       | 2736          | 3048            |
|           | 18900   | 1880.00        | 16QAM      | 2724          | 2976            |
|           |         |                | QPSK       | 2736          | 3024            |
|           | 19185   | 1908.50        | 16QAM      | 2724          | 2988            |
|           |         |                | QPSK       | 2736          | 3048            |
| 5MHz      | 18625   | 1852.50        | 16QAM      | 4520          | 4980            |
|           |         |                | QPSK       | 4520          | 5040            |
|           | 18900   | 1880.00        | 16QAM      | 4500          | 5000            |
|           |         |                | QPSK       | 4520          | 5040            |
|           | 19175   | 1907.50        | 16QAM      | 4520          | 4900            |
|           |         |                | QPSK       | 4540          | 4900            |
| 10MHz     | 18650   | 1855.00        | 16QAM      | 9040          | 10160           |
|           |         |                | QPSK       | 9080          | 10160           |
|           | 18900   | 1880.00        | 16QAM      | 9080          | 10000           |
|           |         |                | QPSK       | 9080          | 10240           |
|           | 19150   | 1905.00        | 16QAM      | 9080          | 10160           |
|           |         |                | QPSK       | 9080          | 10280           |
| 15MHz     | 18675   | 1857.50        | 16QAM      | 13500         | 14580           |
|           |         |                | QPSK       | 13500         | 15000           |
|           | 18900   | 1880.00        | 16QAM      | 13560         | 14820           |
|           |         |                | QPSK       | 13560         | 14880           |
|           | 19125   | 1902.50        | 16QAM      | 13560         | 14640           |
|           |         |                | QPSK       | 13500         | 14880           |
| 20MHz     | 18700   | 1860.00        | 16QAM      | 18000         | 19280           |
|           |         |                | QPSK       | 18080         | 19360           |
|           | 18900   | 1880.00        | 16QAM      | 17920         | 19200           |
|           |         |                | QPSK       | 17920         | 19440           |
|           | 19100   | 1900.00        | 16QAM      | 17920         | 19440           |
|           |         |                | QPSK       | 17920         | 19360           |

**LTE Band 4 part:**

| Bandwidth | Channel | Frequency(MHz) | Modulation | 99% OBW (kHz) | -26dBcEBW (kHz) |
|-----------|---------|----------------|------------|---------------|-----------------|
| 1.4MHz    | 19957   | 1710.7         | 16QAM      | 1086          | 1248            |
|           |         |                | QPSK       | 1104          | 1278            |
|           | 20175   | 1732.5         | 16QAM      | 1098          | 1248            |
|           |         |                | QPSK       | 1098          | 1260            |
|           | 20393   | 1754.3         | 16QAM      | 1092          | 1266            |
|           |         |                | QPSK       | 1098          | 1254            |
| 3MHz      | 19965   | 1711.5         | 16QAM      | 2724          | 2976            |
|           |         |                | QPSK       | 2736          | 3036            |
|           | 20175   | 1732.5         | 16QAM      | 2724          | 3000            |
|           |         |                | QPSK       | 2736          | 3024            |
|           | 20385   | 1750.5         | 16QAM      | 2724          | 2988            |
|           |         |                | QPSK       | 2736          | 3024            |
| 5MHz      | 19975   | 1712.5         | 16QAM      | 4520          | 4940            |
|           |         |                | QPSK       | 4520          | 4980            |
|           | 20175   | 1732.5         | 16QAM      | 4500          | 4940            |
|           |         |                | QPSK       | 4520          | 5000            |
|           | 20375   | 1752.5         | 16QAM      | 4520          | 4900            |
|           |         |                | QPSK       | 4540          | 5060            |
| 10MHz     | 20000   | 1715.0         | 16QAM      | 9040          | 10120           |
|           |         |                | QPSK       | 9080          | 10320           |
|           | 20175   | 1732.5         | 16QAM      | 9080          | 10040           |
|           |         |                | QPSK       | 9080          | 10160           |
|           | 20350   | 1750.0         | 16QAM      | 9080          | 10040           |
|           |         |                | QPSK       | 9080          | 10320           |
| 15MHz     | 20025   | 1717.5         | 16QAM      | 13500         | 14820           |
|           |         |                | QPSK       | 13500         | 14820           |
|           | 20175   | 1732.5         | 16QAM      | 13560         | 14520           |
|           |         |                | QPSK       | 13560         | 14880           |
|           | 20325   | 1747.5         | 16QAM      | 13560         | 14700           |
|           |         |                | QPSK       | 13500         | 14880           |
| 20MHz     | 20050   | 1720.0         | 16QAM      | 18000         | 18960           |
|           |         |                | QPSK       | 18080         | 19440           |
|           | 20175   | 1732.5         | 16QAM      | 17920         | 19360           |
|           |         |                | QPSK       | 17920         | 19440           |
|           | 20300   | 1745.0         | 16QAM      | 17920         | 19200           |
|           |         |                | QPSK       | 17920         | 19600           |



**LTE Band 5 part:**

| EUT Mode | Channel | Frequency (MHz) | Modulation | 99% OBW (kHz) | -26dB EBW (kHz) |
|----------|---------|-----------------|------------|---------------|-----------------|
| 1.4MHz   | 20407   | 824.70          | 16QAM      | 1098          | 1248            |
|          |         |                 | QPSK       | 1104          | 1266            |
|          | 20525   | 836.50          | 16QAM      | 1098          | 1260            |
|          |         |                 | QPSK       | 1098          | 1272            |
|          | 20643   | 848.30          | 16QAM      | 1098          | 1272            |
|          |         |                 | QPSK       | 1098          | 1266            |
| 3MHz     | 20415   | 825.50          | 16QAM      | 2724          | 2976            |
|          |         |                 | QPSK       | 2736          | 3036            |
|          | 20525   | 836.50          | 16QAM      | 2736          | 3000            |
|          |         |                 | QPSK       | 2736          | 3036            |
|          | 20635   | 847.50          | 16QAM      | 2724          | 3036            |
|          |         |                 | QPSK       | 2736          | 3036            |
| 5MHz     | 20425   | 826.50          | 16QAM      | 4520          | 4980            |
|          |         |                 | QPSK       | 4520          | 5000            |
|          | 20525   | 836.50          | 16QAM      | 4520          | 4980            |
|          |         |                 | QPSK       | 4520          | 5020            |
|          | 20625   | 846.50          | 16QAM      | 4500          | 4940            |
|          |         |                 | QPSK       | 4520          | 5020            |
| 10MHz    | 20450   | 829.00          | 16QAM      | 9040          | 10040           |
|          |         |                 | QPSK       | 9080          | 10120           |
|          | 20525   | 836.50          | 16QAM      | 9120          | 10240           |
|          |         |                 | QPSK       | 9120          | 10200           |
|          | 20600   | 844.00          | 16QAM      | 9040          | 10120           |
|          |         |                 | QPSK       | 9040          | 10120           |

**LTE Band 7 part:**

| Bandwidth | Channel | Frequency (MHz) | Modulation | 99% OBW (kHz) | -26dB EBW (kHz) |
|-----------|---------|-----------------|------------|---------------|-----------------|
| 5MHz      | 20775   | 2502.5          | 16QAM      | 4520          | 4940            |
|           |         |                 | QPSK       | 4540          | 5000            |
|           | 21100   | 2535.0          | 16QAM      | 4520          | 4840            |
|           |         |                 | QPSK       | 4520          | 5020            |
|           | 21425   | 2567.5          | 16QAM      | 4500          | 4960            |
|           |         |                 | QPSK       | 4540          | 4980            |
| 10MHz     | 20800   | 2505.0          | 16QAM      | 9080          | 10000           |
|           |         |                 | QPSK       | 9080          | 10280           |
|           | 21100   | 2535.0          | 16QAM      | 9120          | 10080           |
|           |         |                 | QPSK       | 9080          | 10240           |
|           | 21400   | 2565.0          | 16QAM      | 9120          | 10120           |
|           |         |                 | QPSK       | 9080          | 10240           |
| 15MHz     | 20825   | 2507.5          | 16QAM      | 13500         | 14640           |
|           |         |                 | QPSK       | 13560         | 14940           |
|           | 21100   | 2535.0          | 16QAM      | 13560         | 14880           |
|           |         |                 | QPSK       | 13500         | 14880           |
|           | 21375   | 2562.5          | 16QAM      | 13500         | 14640           |
|           |         |                 | QPSK       | 13560         | 14820           |
| 20MHz     | 20850   | 2510.0          | 16QAM      | 17920         | 19200           |
|           |         |                 | QPSK       | 17920         | 19280           |
|           | 21100   | 2535.0          | 16QAM      | 18000         | 19280           |
|           |         |                 | QPSK       | 18000         | 19520           |
|           | 21350   | 2560.0          | 16QAM      | 18000         | 19440           |
|           |         |                 | QPSK       | 18080         | 19680           |

**LTE Band 12 part:**

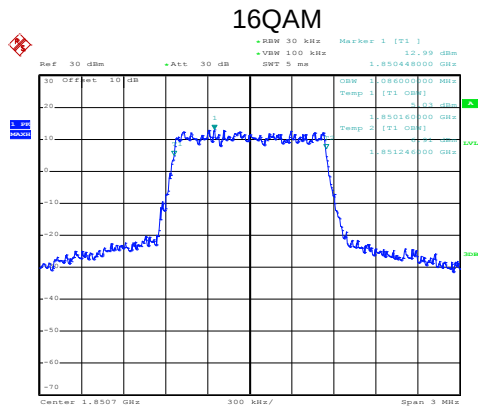
| EUT Mode | Channel | Frequency (MHz) | Modulation | 99% OBW (kHz) | -26dB EBW (kHz) |
|----------|---------|-----------------|------------|---------------|-----------------|
| 1.4MHz   | 23017   | 699.70          | 16QAM      | 1098          | 1236            |
|          |         |                 | QPSK       | 1104          | 1260            |
|          | 23095   | 707.50          | 16QAM      | 1098          | 1278            |
|          |         |                 | QPSK       | 1098          | 1284            |
|          | 23175   | 715.30          | 16QAM      | 1098          | 1272            |
|          |         |                 | QPSK       | 1098          | 1266            |
| 3MHz     | 23025   | 700.50          | 16QAM      | 2712          | 2988            |
|          |         |                 | QPSK       | 2736          | 3036            |
|          | 23095   | 707.50          | 16QAM      | 2736          | 2988            |
|          |         |                 | QPSK       | 2736          | 3048            |
|          | 23165   | 714.50          | 16QAM      | 2724          | 2988            |
|          |         |                 | QPSK       | 2736          | 3024            |
| 5MHz     | 23035   | 701.50          | 16QAM      | 4500          | 4940            |
|          |         |                 | QPSK       | 4520          | 5020            |
|          | 23095   | 707.50          | 16QAM      | 4520          | 4860            |
|          |         |                 | QPSK       | 4540          | 4960            |
|          | 23155   | 713.50          | 16QAM      | 4500          | 4880            |
|          |         |                 | QPSK       | 4520          | 4980            |
| 10MHz    | 23060   | 704.00          | 16QAM      | 9080          | 10160           |
|          |         |                 | QPSK       | 9080          | 10120           |
|          | 23095   | 707.50          | 16QAM      | 9160          | 10240           |
|          |         |                 | QPSK       | 9160          | 10280           |
|          | 23130   | 711.00          | 16QAM      | 9040          | 10080           |
|          |         |                 | QPSK       | 9040          | 10120           |

**LTE Band 17 part:**

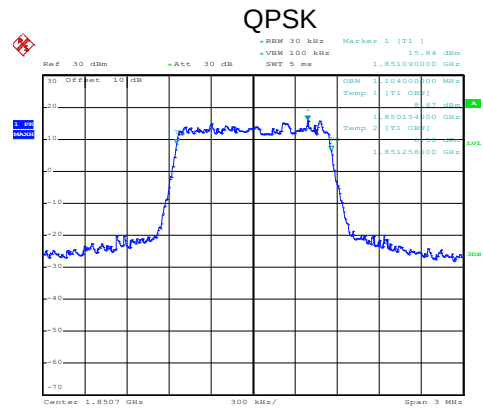
| Bandwidth | Channel | Frequency (MHz) | Modulation | 99% OBW (kHz) | -26dB EBW (kHz) |
|-----------|---------|-----------------|------------|---------------|-----------------|
| 5MHz      | 23755   | 706.5           | 16QAM      | 4520          | 4900            |
|           |         |                 | QPSK       | 4560          | 5080            |
|           | 23790   | 710.0           | 16QAM      | 4520          | 4880            |
|           |         |                 | QPSK       | 4520          | 5000            |
|           | 23825   | 713.5           | 16QAM      | 4500          | 4960            |
|           |         |                 | QPSK       | 4520          | 5020            |
| 10MHz     | 23780   | 709.0           | 16QAM      | 9120          | 10040           |
|           |         |                 | QPSK       | 9120          | 10240           |
|           | 23790   | 710.0           | 16QAM      | 9120          | 10040           |
|           |         |                 | QPSK       | 9080          | 10120           |
|           | 23800   | 711.0           | 16QAM      | 9040          | 10040           |
|           |         |                 | QPSK       | 9040          | 10160           |

Test plot as follows:  
LTE Band 2 part

99% Occupy bandwidth  
BW: 1.4MHz

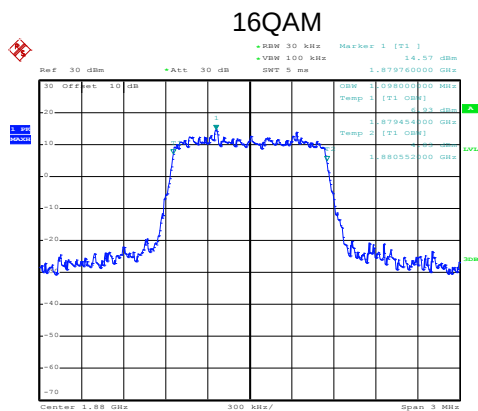


Date: 13.OCT.2017 21:45:51

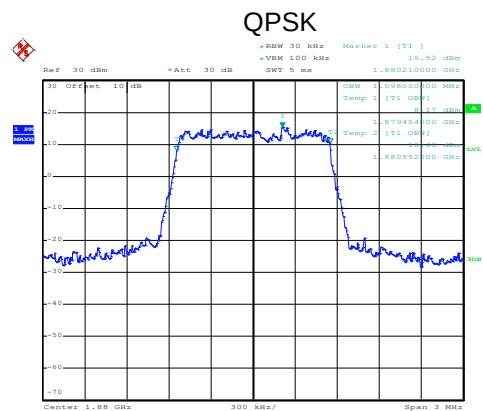


Date: 13.OCT.2017 21:45:46

Lowest channel

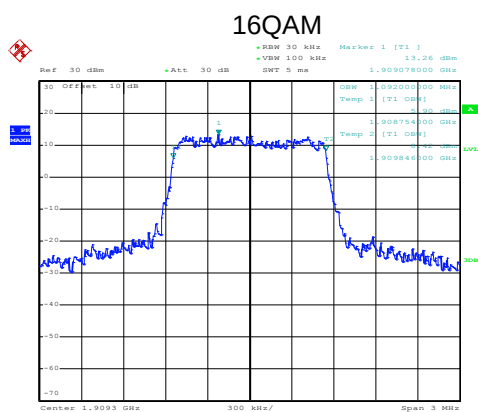


Date: 13.OCT.2017 21:46:30

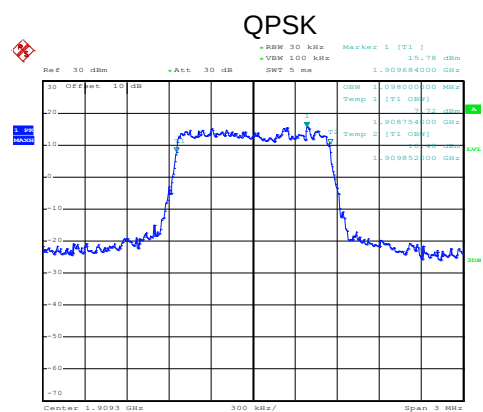


Date: 13.OCT.2017 21:46:27

Middle channel



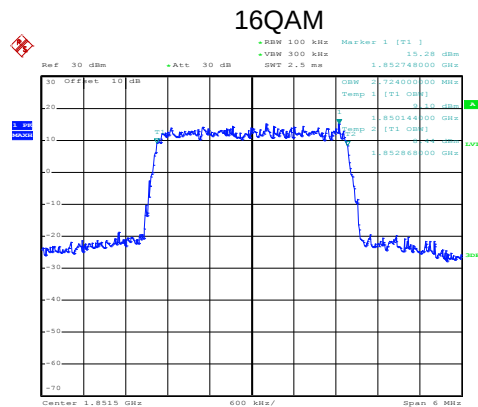
Date: 13.OCT.2017 21:46:48



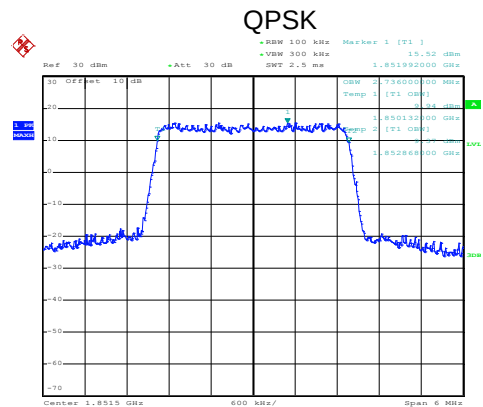
Date: 13.OCT.2017 21:46:44

Highest channel

99% Occupy bandwidth  
BW: 3MHz

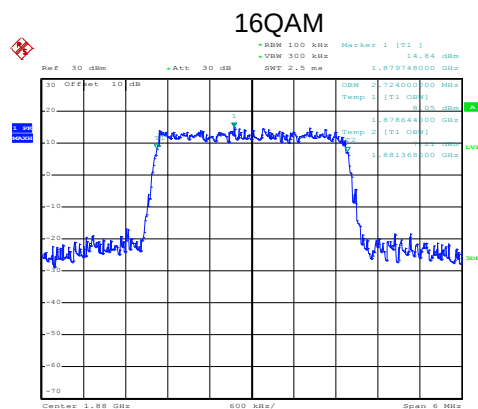


Date: 13.OCT.2017 21:47:41

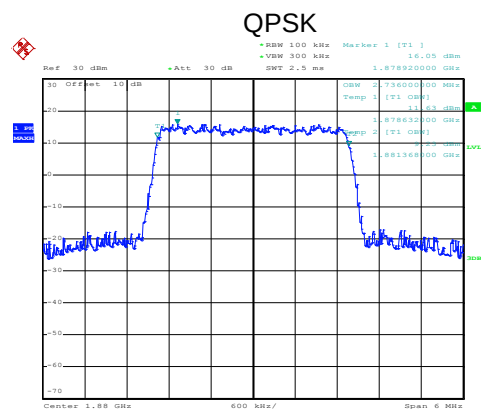


Date: 13.OCT.2017 21:47:38

Lowest channel

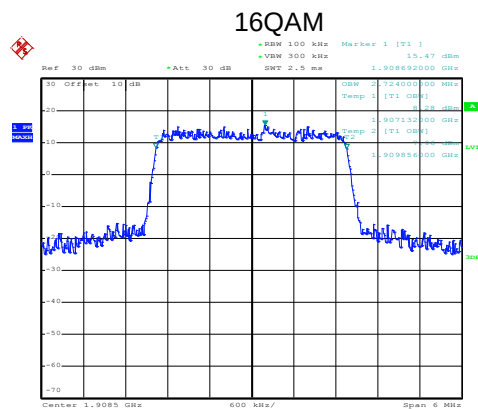


Date: 13.OCT.2017 21:47:56

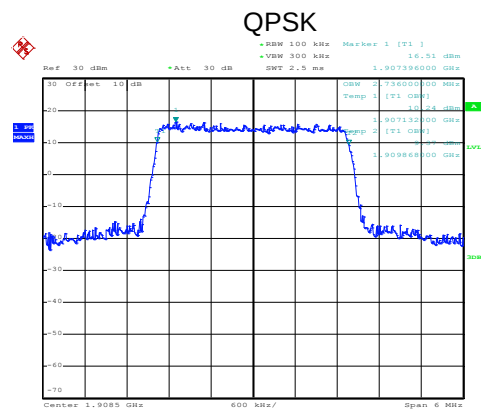


Date: 13.OCT.2017 21:47:53

Middle channel



Date: 13.OCT.2017 21:48:37

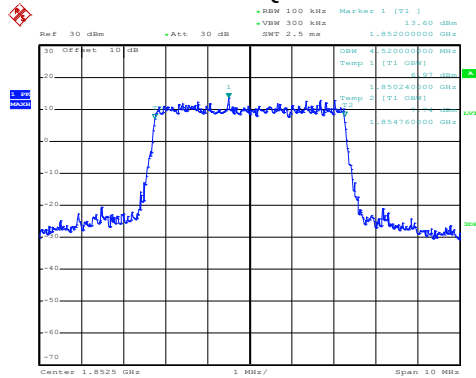


Date: 13.OCT.2017 21:48:33

Highest channel

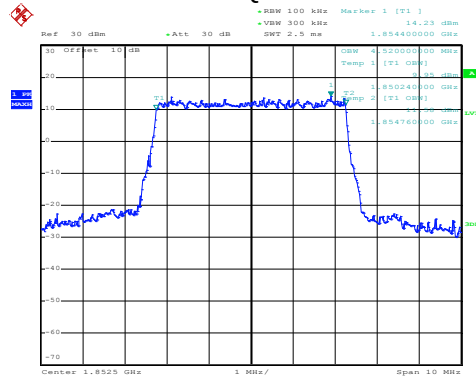
99% Occupy bandwidth  
BW: 5MHz

16QAM



Date: 13.OCT.2017 21:49:09

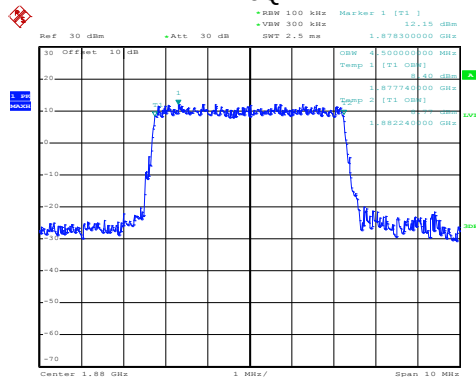
QPSK



Date: 13.OCT.2017 21:49:04

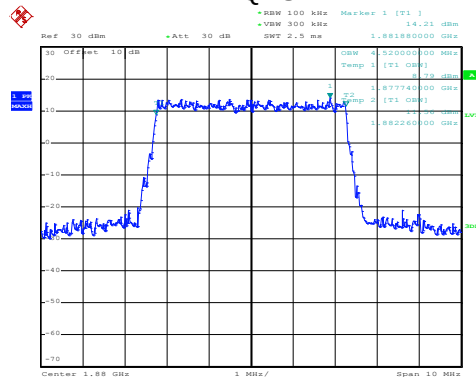
Lowest channel

16QAM



Date: 13.OCT.2017 21:49:49

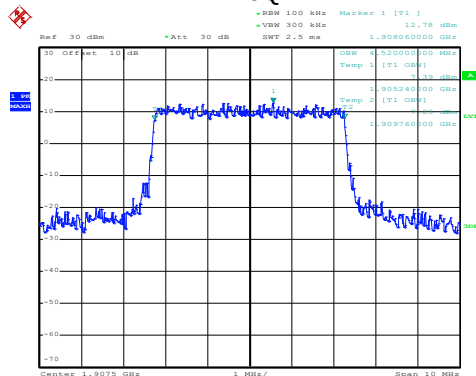
QPSK



Date: 13.OCT.2017 21:49:41

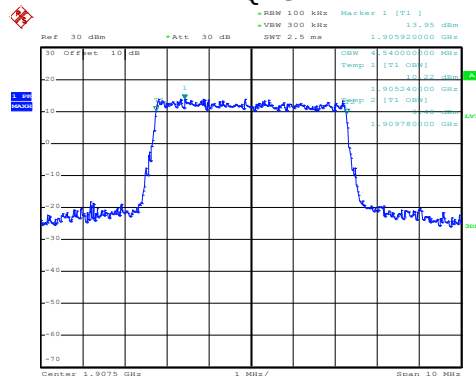
Middle channel

16QAM



Date: 13.OCT.2017 21:50:09

QPSK

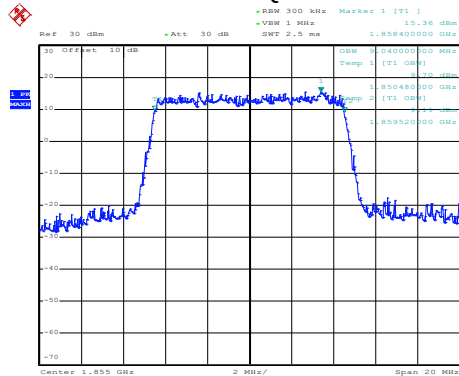


Date: 13.OCT.2017 21:50:05

Highest channel

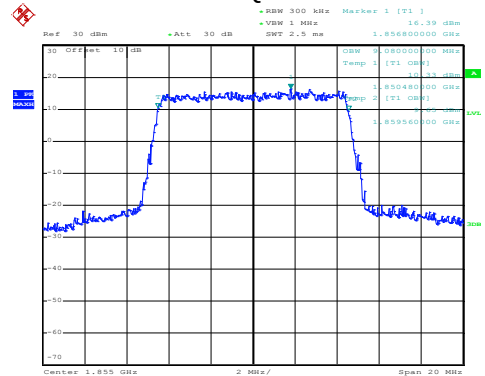
99% Occupancy bandwidth  
BW: 10MHz

### 16QAM



Date: 13.OCT.2017 21:51:26

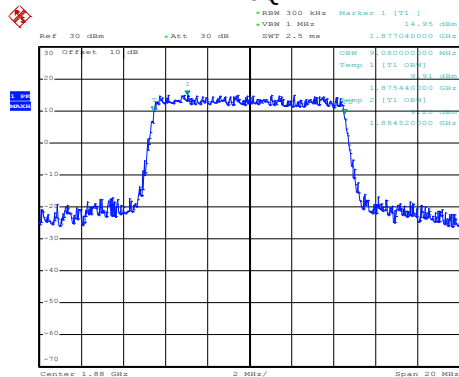
### QPSK



Date: 13.OCT.2017 21:51:32

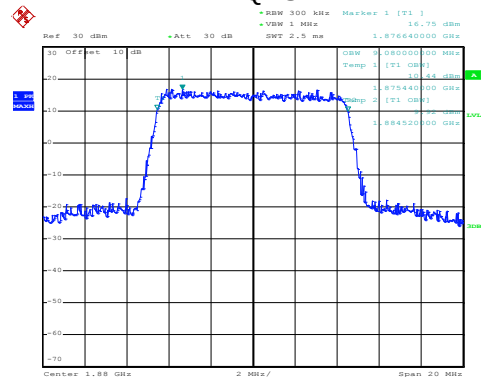
Lowest channel

### 16QAM



Date: 13.OCT.2017 21:52:11

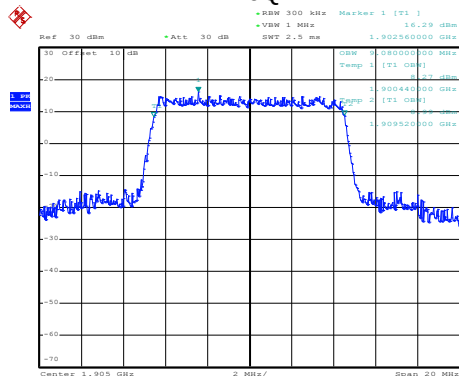
### QPSK



Date: 13.OCT.2017 21:52:07

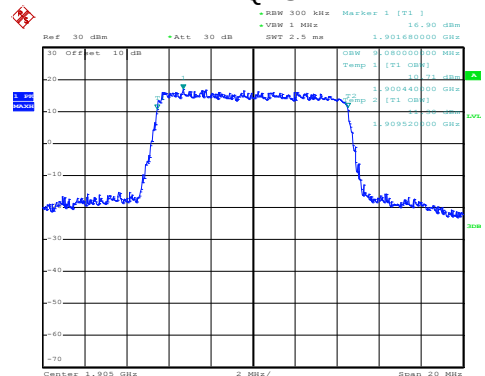
Middle channel

### 16QAM



Date: 13.OCT.2017 21:52:31

### QPSK

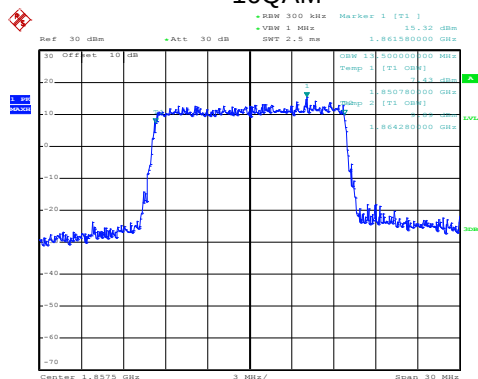


Date: 13.OCT.2017 21:52:27

Highest channel

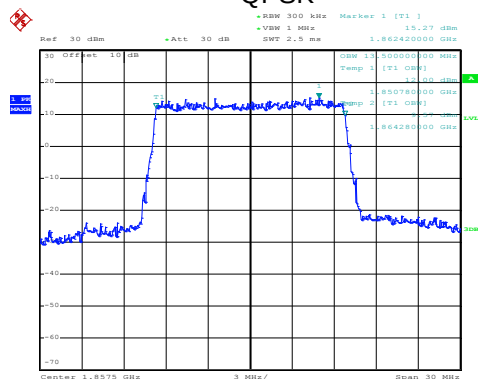
99% Occupancy bandwidth  
BW: 15MHz

16QAM



Date: 13.OCT.2017 21:53:16

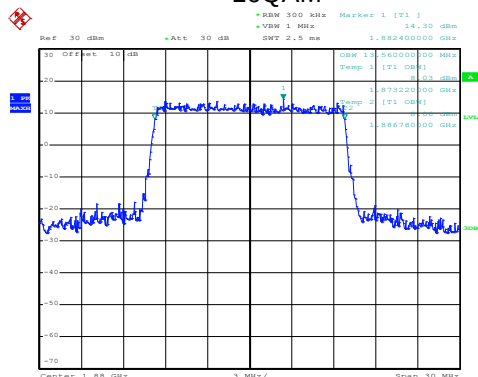
QPSK



Date: 13.OCT.2017 21:53:12

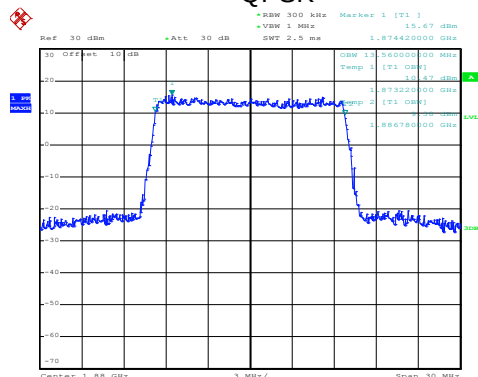
Lowest channel

16QAM



Date: 13.OCT.2017 21:53:34

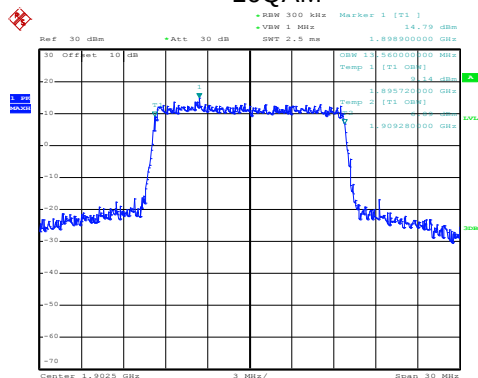
QPSK



Date: 13.OCT.2017 21:53:29

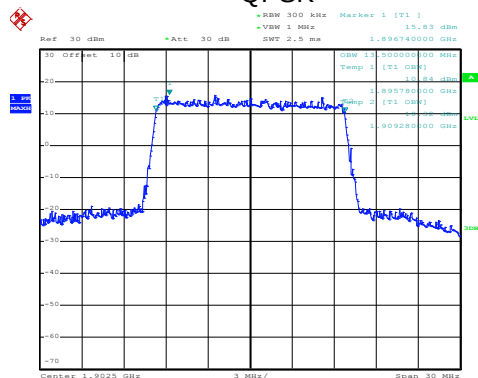
Middle channel

16QAM



Date: 13.OCT.2017 21:54:14

QPSK

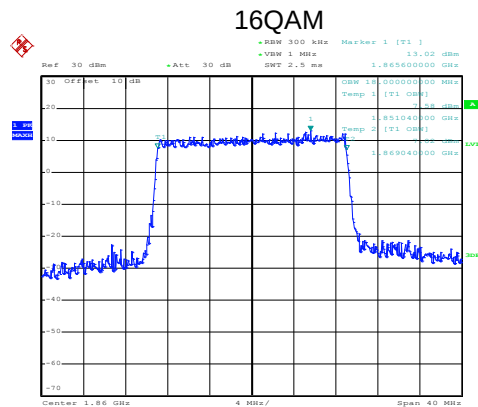


Date: 13.OCT.2017 21:54:10

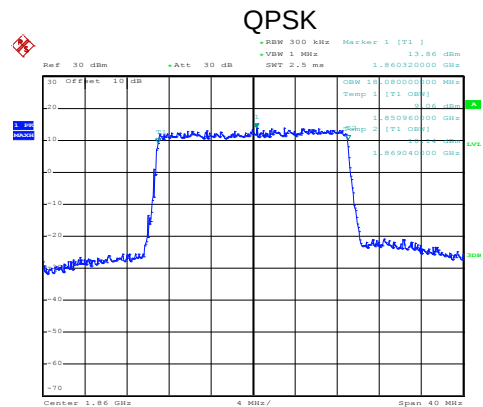
Highest channel



99% Occupy bandwidth  
BW: 20MHz

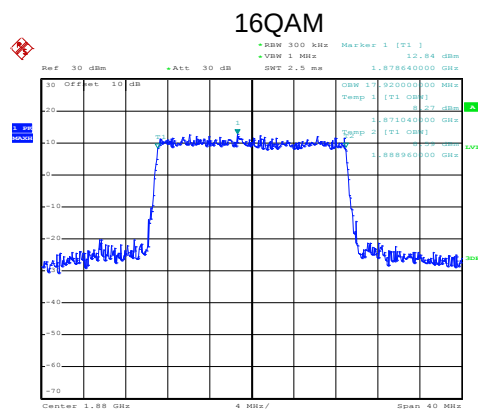


Date: 13.OCT.2017 21:54:50

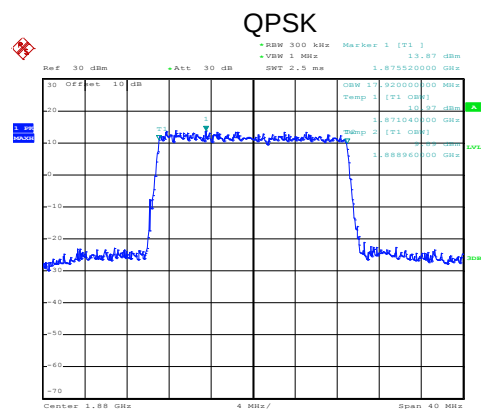


Date: 13.OCT.2017 21:54:46

Lowest channel

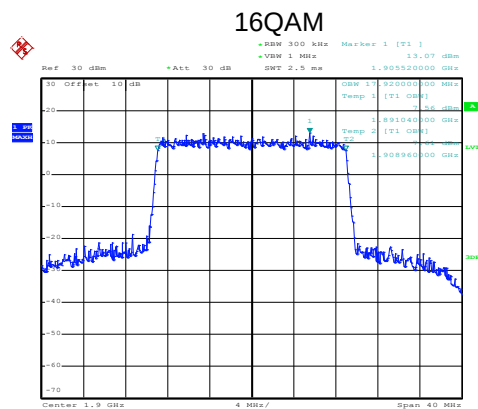


Date: 13.OCT.2017 21:55:28

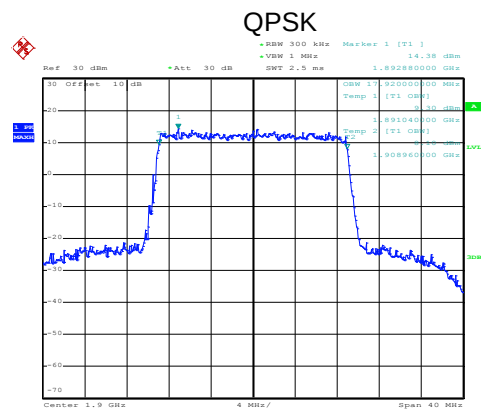


Date: 13.OCT.2017 21:55:24

Middle channel



Date: 13.OCT.2017 21:55:45

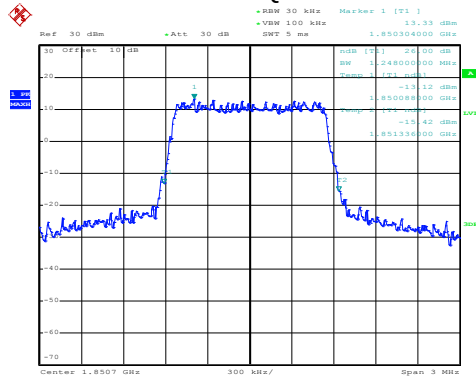


Date: 13.OCT.2017 21:55:41

Highest channel

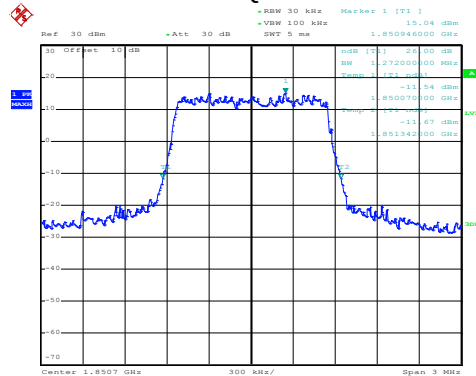
-26dBc bandwidth  
BW: 1.4MHz

16QAM



Date: 13.OCT.2017 21:46:00

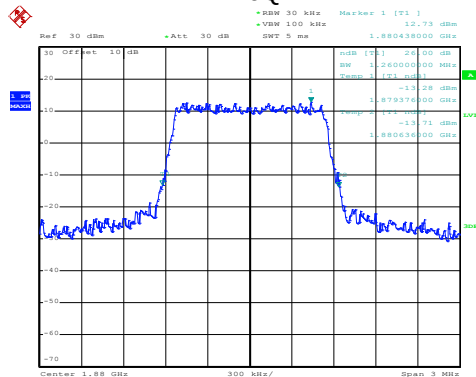
QPSK



Date: 13.OCT.2017 21:45:57

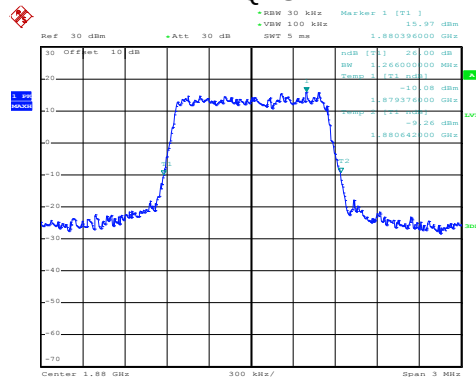
Lowest channel

16QAM



Date: 13.OCT.2017 21:46:18

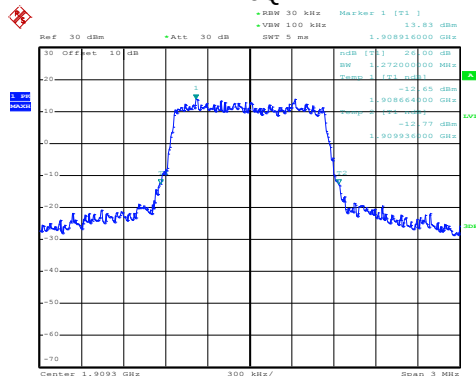
QPSK



Date: 13.OCT.2017 21:46:14

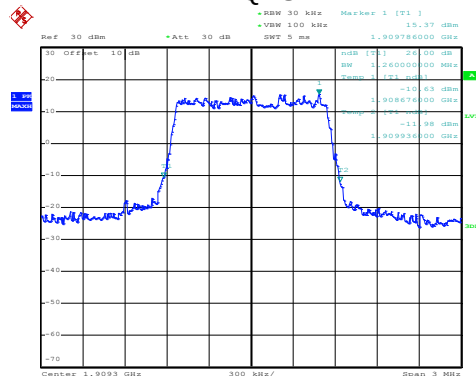
Middle channel

16QAM



Date: 13.OCT.2017 21:46:59

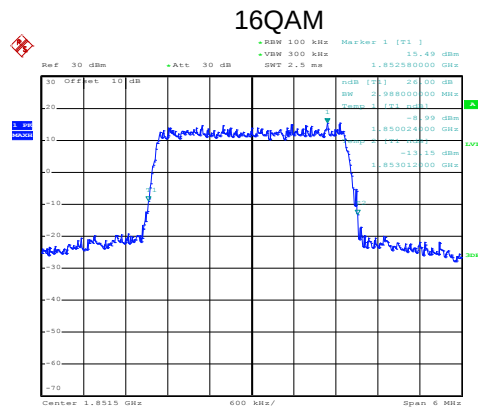
QPSK



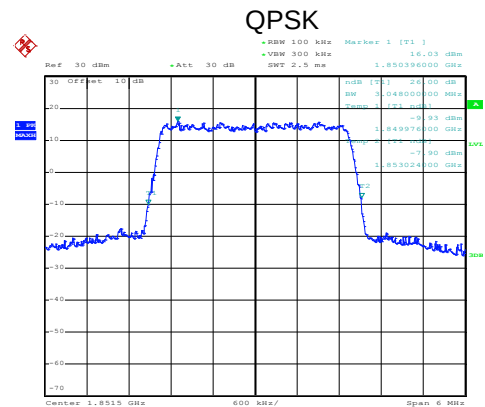
Date: 13.OCT.2017 21:46:55

Highest channel

-26dBc bandwidth  
BW: 3MHz

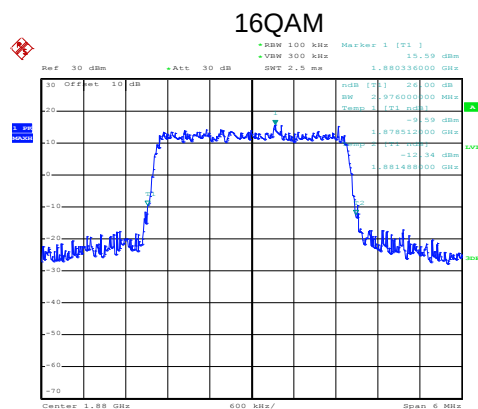


Date: 13.OCT.2017 21:47:32

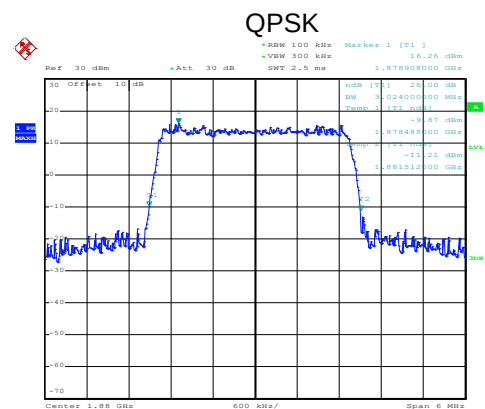


Date: 13.OCT.2017 21:47:28

Lowest channel

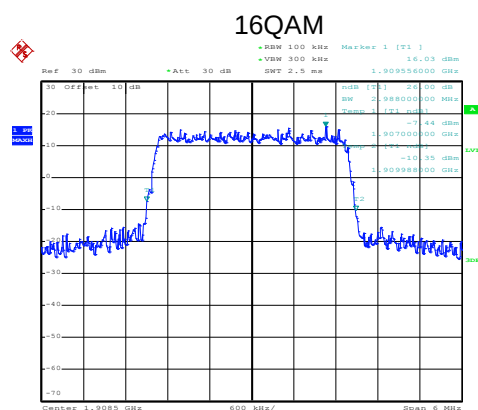


Date: 13.OCT.2017 21:48:05

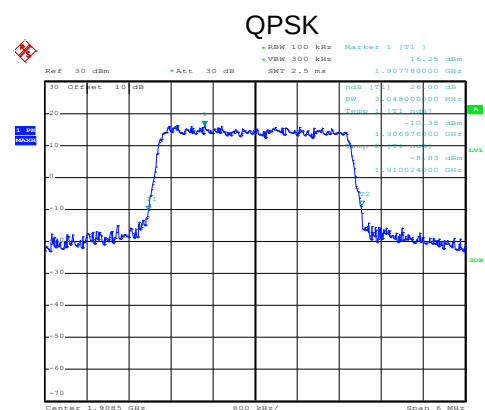


Date: 13.OCT.2017 21:48:02

Middle channel



Date: 13.OCT.2017 21:48:21

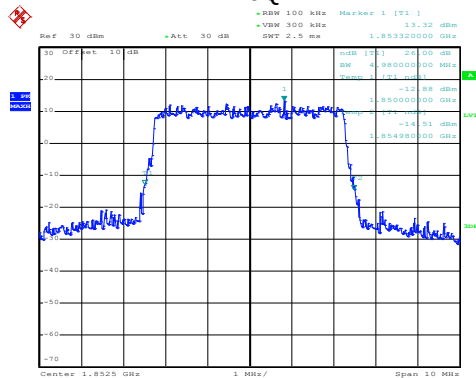


Date: 13.OCT.2017 21:48:18

Highest channel

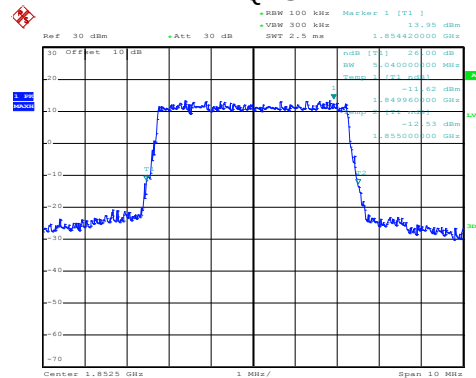
-26dBc bandwidth  
BW: 5MHz

## 16QAM



Date: 13.OCT.2017 21:49:18

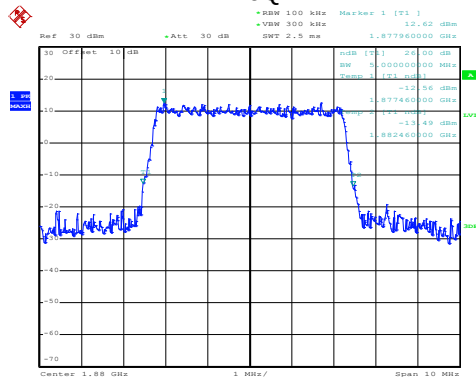
## QPSK



Date: 13.OCT.2017 21:49:15

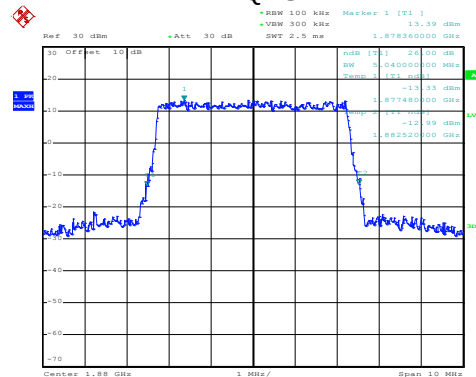
Lowest channel

## 16QAM



Date: 13.OCT.2017 21:49:35

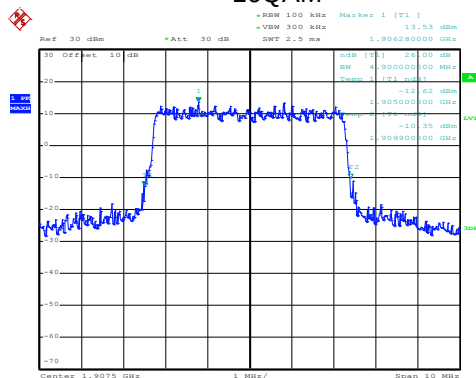
## QPSK



Date: 13.OCT.2017 21:49:30

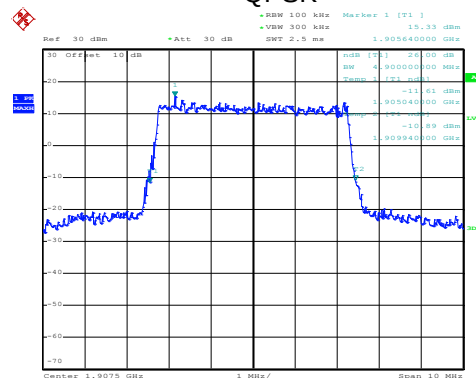
Middle channel

## 16QAM



Date: 13.OCT.2017 21:50:18

## QPSK

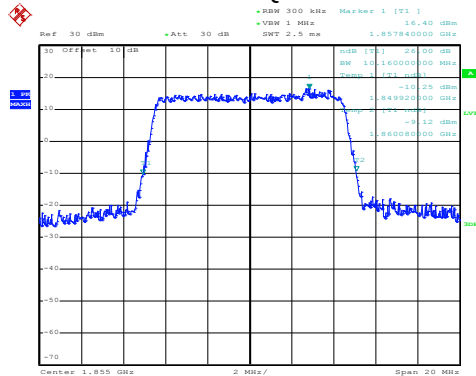


Date: 13.OCT.2017 21:50:15

Highest channel

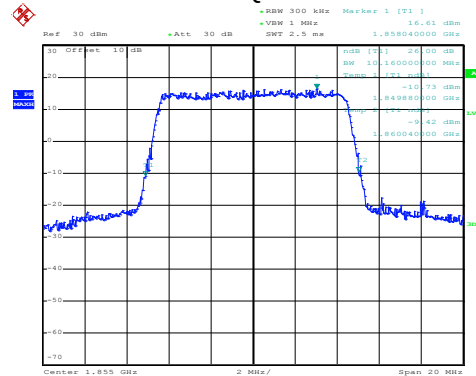
-26dBc bandwidth  
BW: 10MHz

## 16QAM



Date: 13.OCT.2017 21:51:45

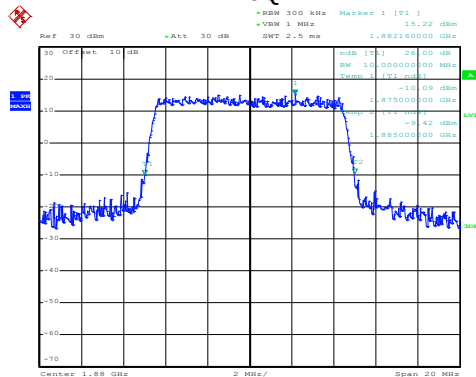
## QPSK



Date: 13.OCT.2017 21:51:38

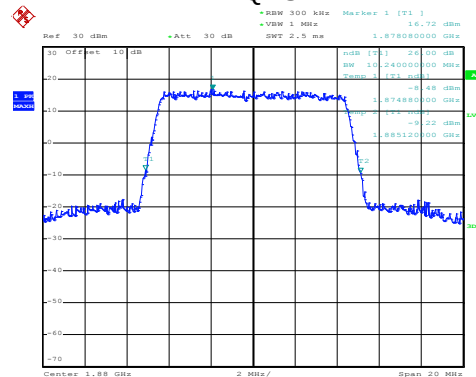
Lowest channel

## 16QAM



Date: 13.OCT.2017 21:52:01

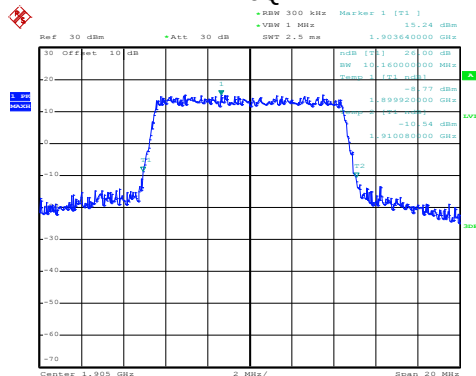
## QPSK



Date: 13.OCT.2017 21:51:57

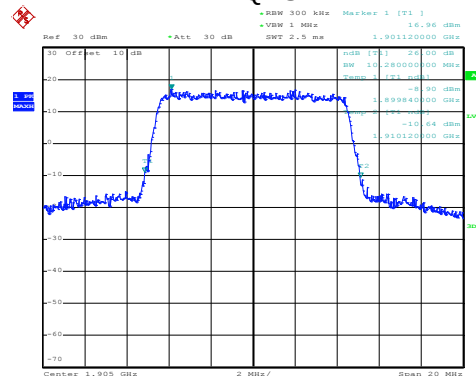
Middle channel

## 16QAM



Date: 13.OCT.2017 21:52:41

## QPSK

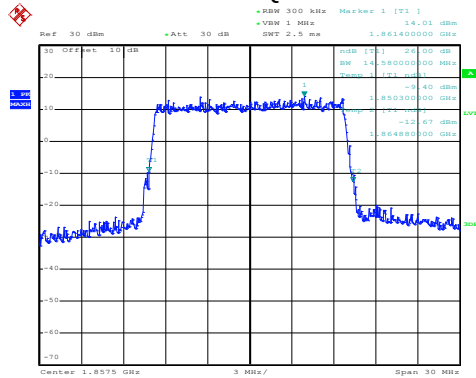


Date: 13.OCT.2017 21:52:37

Highest channel

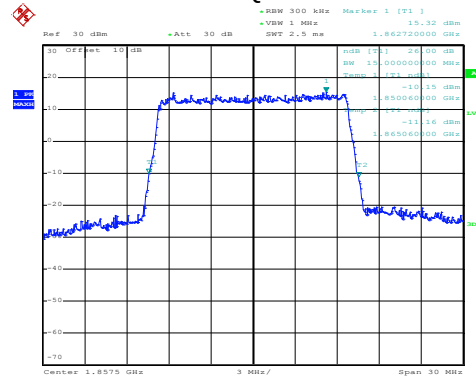
-26dBc bandwidth  
BW: 15MHz

## 16QAM



Date: 13.OCT.2017 21:53:06

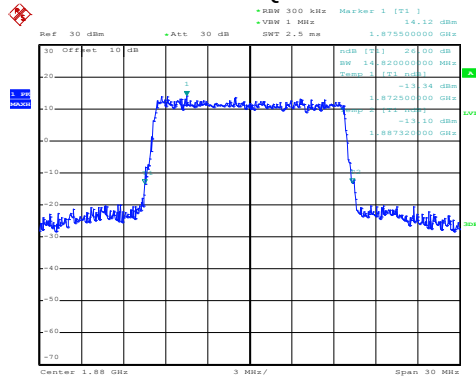
## QPSK



Date: 13.OCT.2017 21:53:03

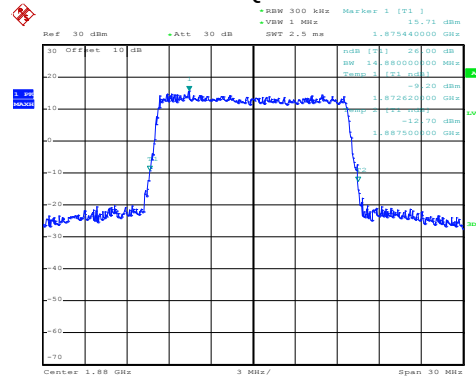
Lowest channel

## 16QAM



Date: 13.OCT.2017 21:53:46

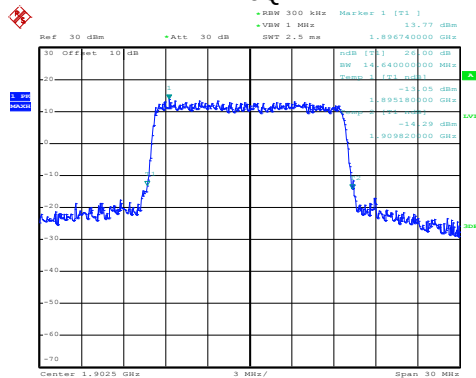
## QPSK



Date: 13.OCT.2017 21:53:42

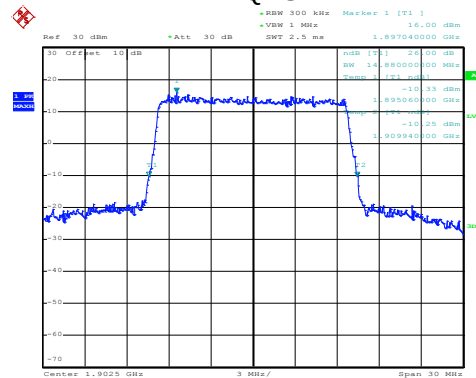
Middle channel

## 16QAM



Date: 13.OCT.2017 21:54:05

## QPSK

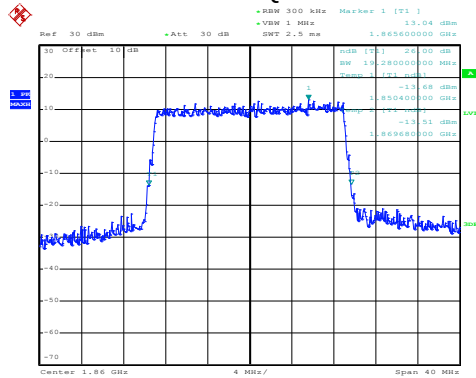


Date: 13.OCT.2017 21:54:01

Highest channel

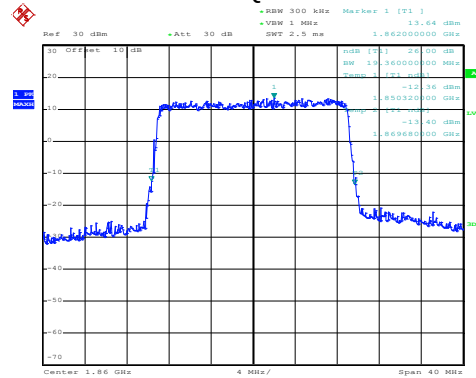
-26dBc bandwidth  
BW: 20MHz

## 16QAM



Date: 13.OCT.2017 21:55:01

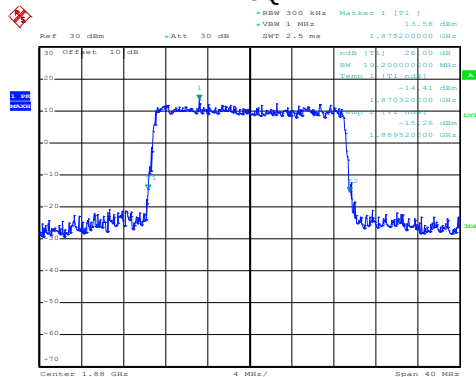
## QPSK



Date: 13.OCT.2017 21:54:57

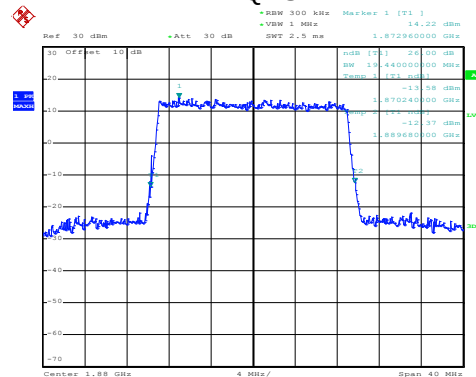
Lowest channel

## 16QAM



Date: 13.OCT.2017 21:55:17

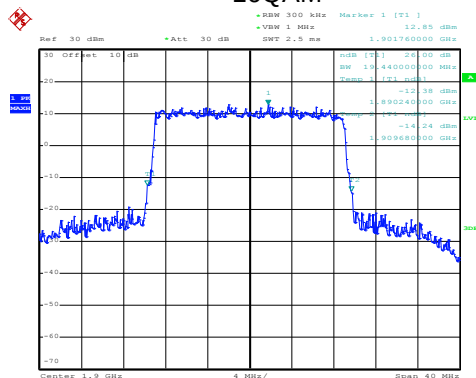
## QPSK



Date: 13.OCT.2017 21:55:13

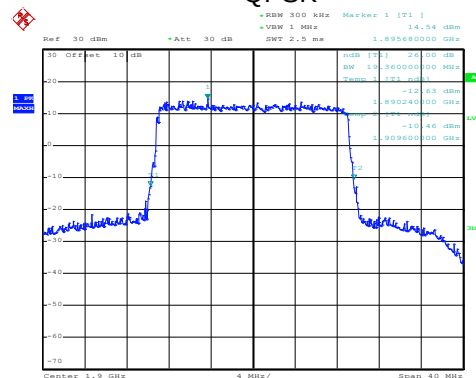
Middle channel

## 16QAM



Date: 13.OCT.2017 21:55:57

## QPSK



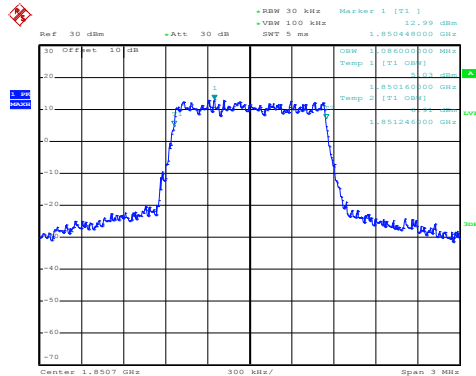
Date: 13.OCT.2017 21:55:53

Highest channel

## LTE Band 4 part

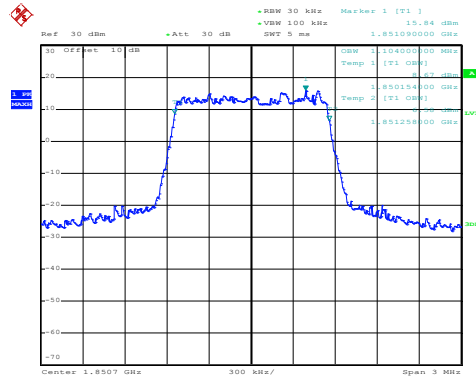
99% Occupancy bandwidth  
BW: 1.4MHz

### 16QAM



Date: 13.OCT.2017 21:45:51

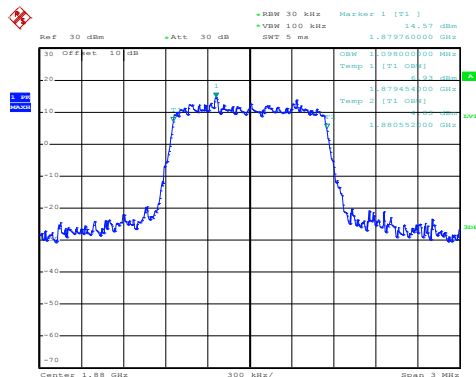
### QPSK



Date: 13.OCT.2017 21:45:46

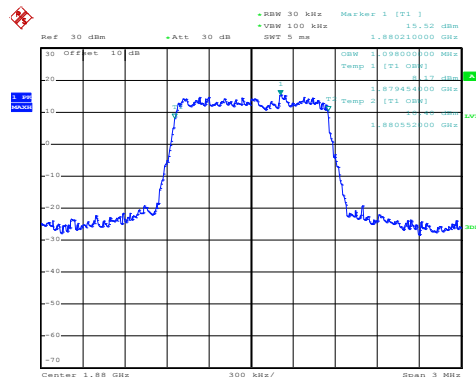
## Lowest channel

### 16QAM



Date: 13.OCT.2017 21:46:30

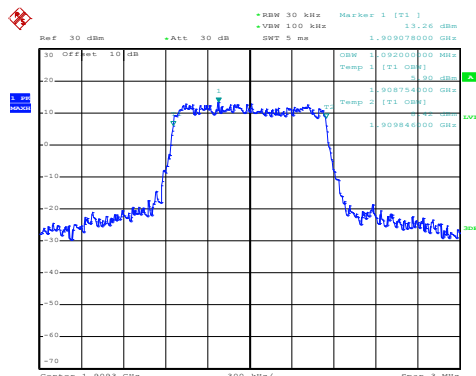
### QPSK



Date: 13.OCT.2017 21:46:27

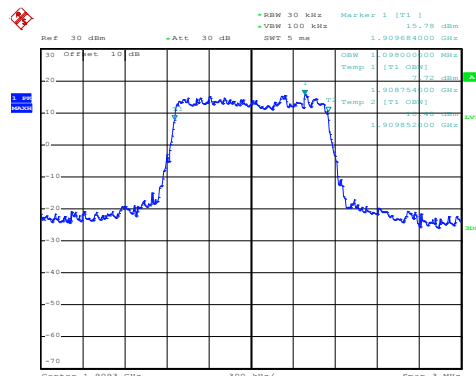
## Middle channel

### 16QAM



Date: 13.OCT.2017 21:46:48

### QPSK



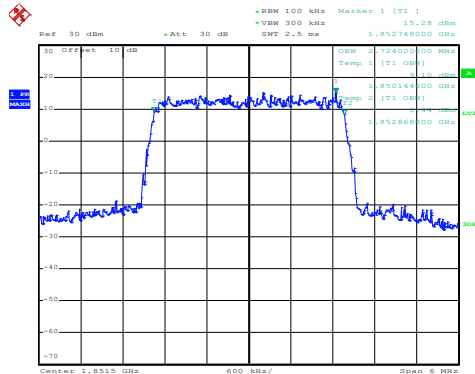
Date: 13.OCT.2017 21:46:44

## Highest channel



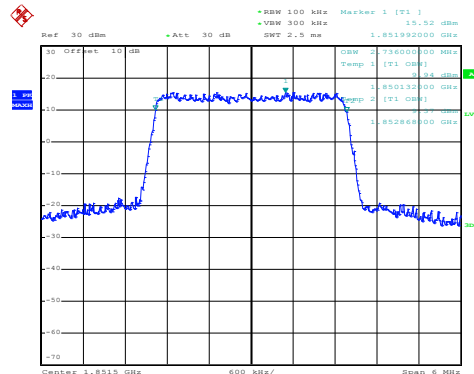
99% Occupancy bandwidth  
BW: 3MHz

16QAM



Date: 13.OCT.2017 21:47:41

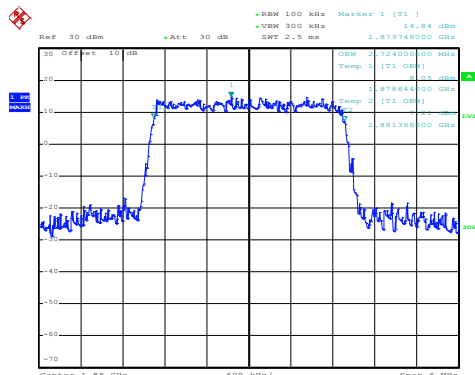
QPSK



Date: 13.OCT.2017 21:47:48

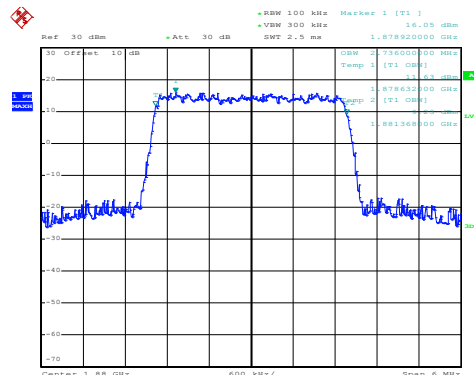
Lowest channel

16QAM



Date: 13.OCT.2017 21:47:56

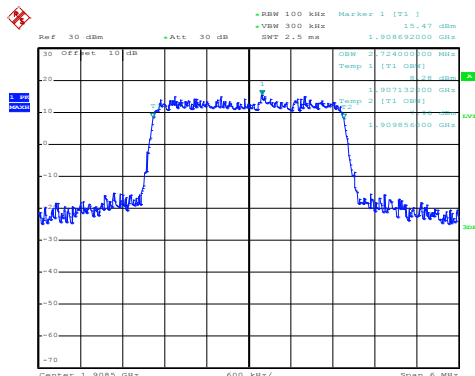
QPSK



Date: 13.OCT.2017 21:47:53

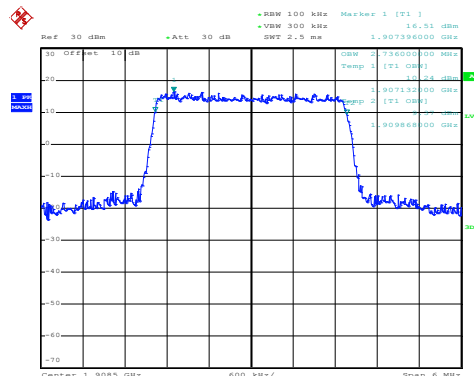
Middle channel

16QAM



Date: 13.OCT.2017 21:48:37

QPSK

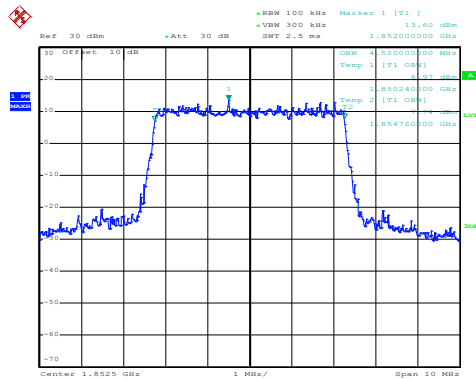


Date: 13.OCT.2017 21:48:33

Highest channel

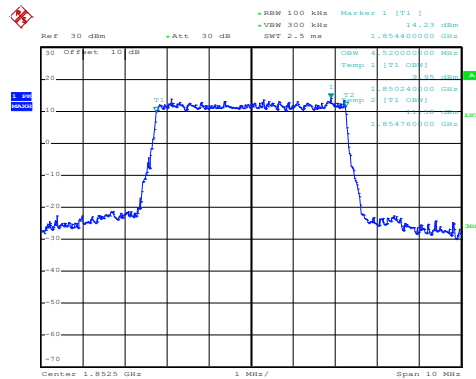
99% Occupy bandwidth  
BW: 5MHz

16QAM



Date: 13.OCT.2017 21:49:09

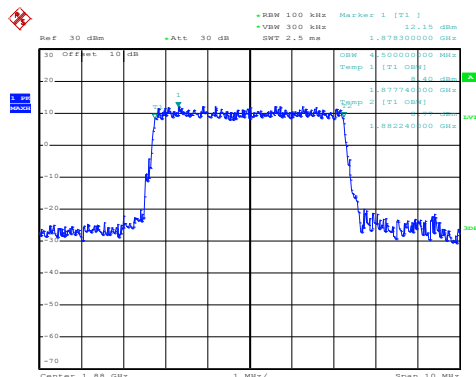
QPSK



Date: 13.OCT.2017 21:49:04

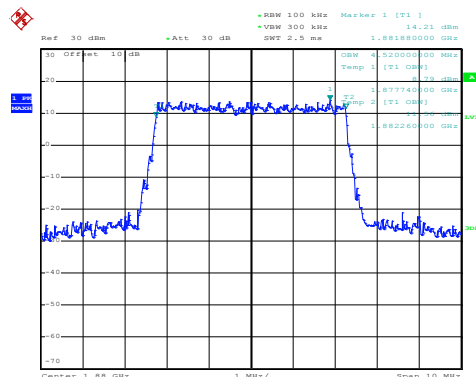
Lowest channel

16QAM



Date: 13.OCT.2017 21:49:49

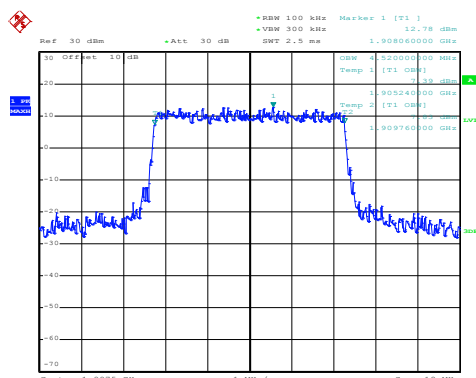
QPSK



Date: 13.OCT.2017 21:49:41

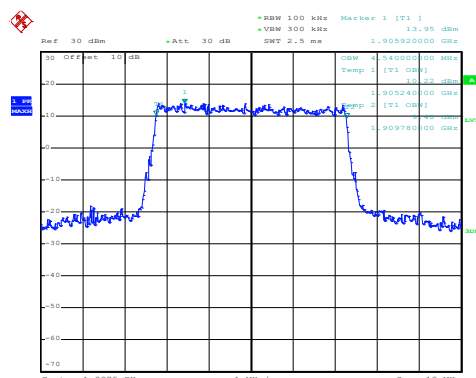
Middle channel

16QAM



Date: 13.OCT.2017 21:50:09

QPSK

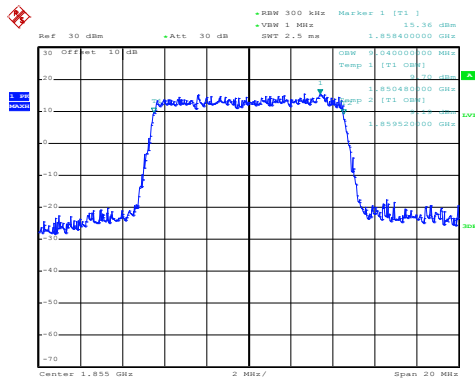


Date: 13.OCT.2017 21:50:05

Highest channel

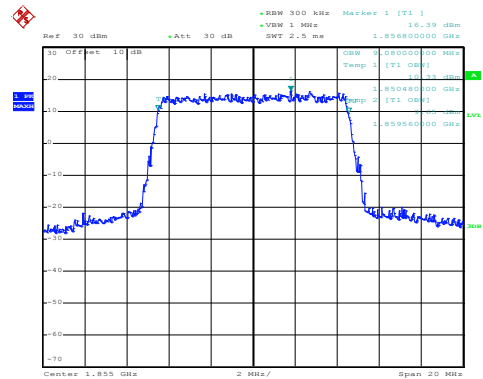
99% Occupy bandwidth  
BW: 10MHz

16QAM



Date: 13.OCT.2017 21:51:26

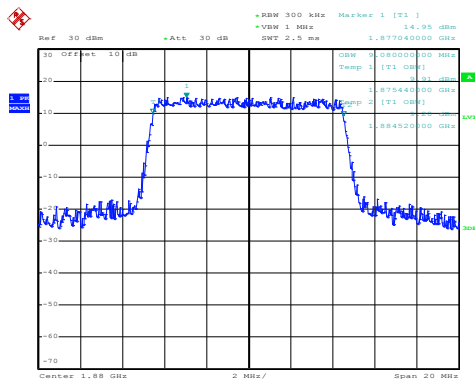
QPSK



Date: 13.OCT.2017 21:51:32

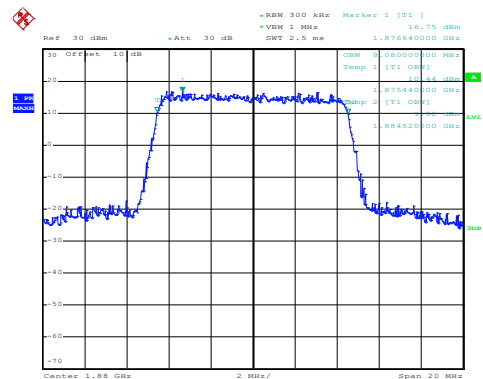
Lowest channel

16QAM



Date: 13.OCT.2017 21:52:11

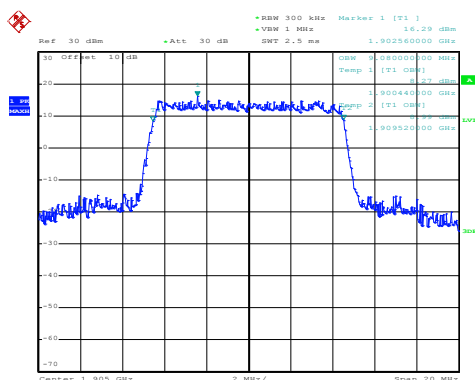
QPSK



Date: 13.OCT.2017 21:52:07

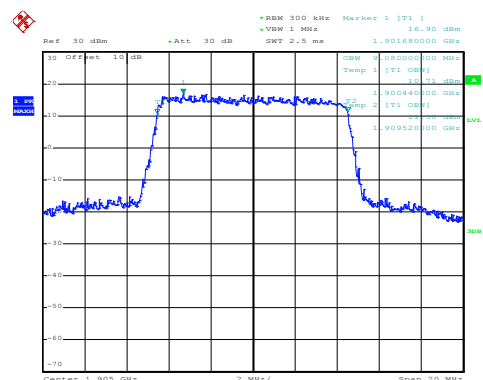
Middle channel

16QAM



Date: 13.OCT.2017 21:52:31

QPSK

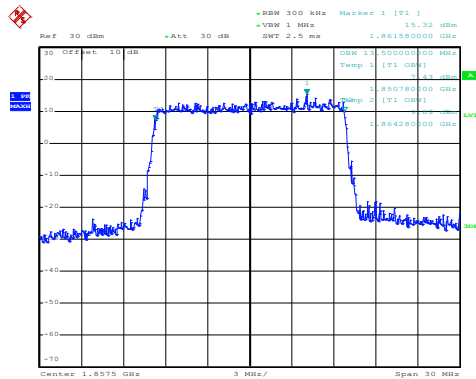


Date: 13.OCT.2017 21:52:27

Highest channel

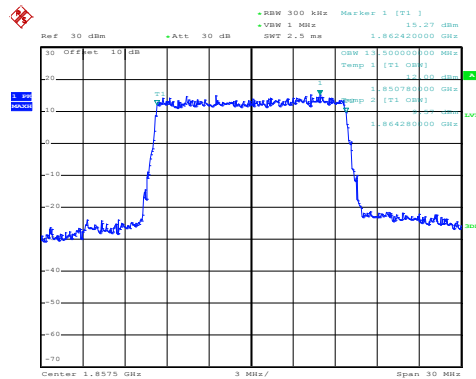
99% Occupy bandwidth  
BW: 15MHz

16QAM



Date: 13.OCT.2017 21:53:16

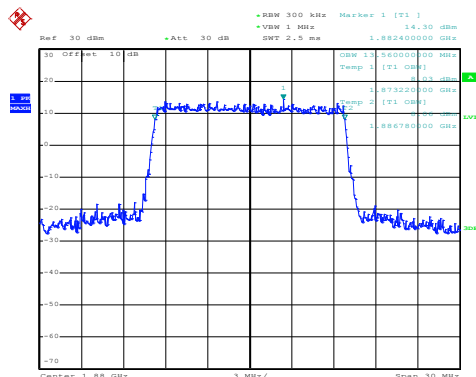
QPSK



Date: 13.OCT.2017 21:53:12

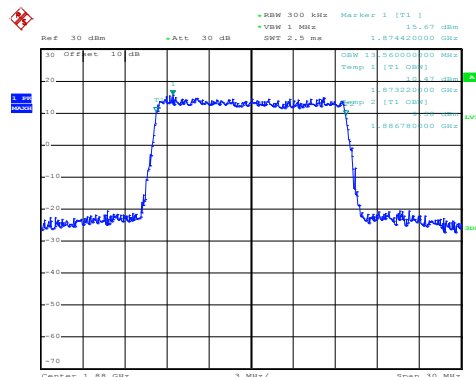
Lowest channel

16QAM



Date: 13.OCT.2017 21:53:34

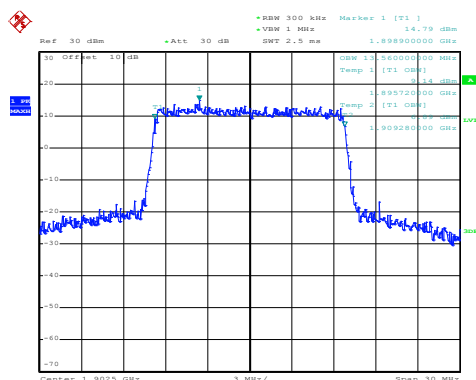
QPSK



Date: 13.OCT.2017 21:53:29

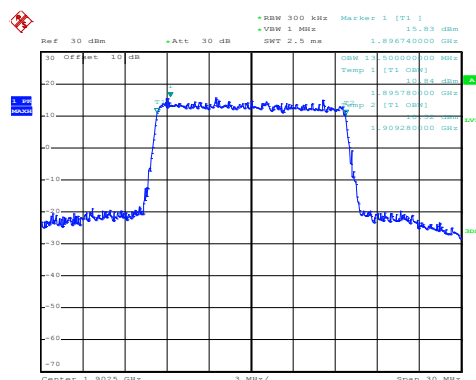
Middle channel

16QAM



Date: 13.OCT.2017 21:54:14

QPSK

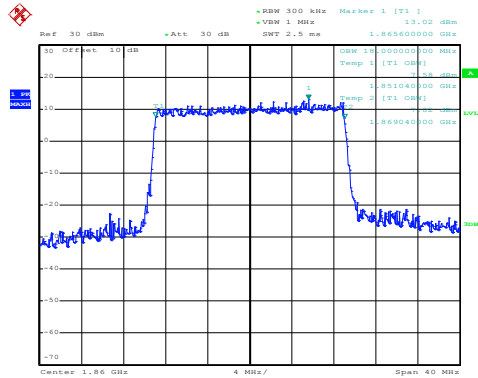


Date: 13.OCT.2017 21:54:10

Highest channel

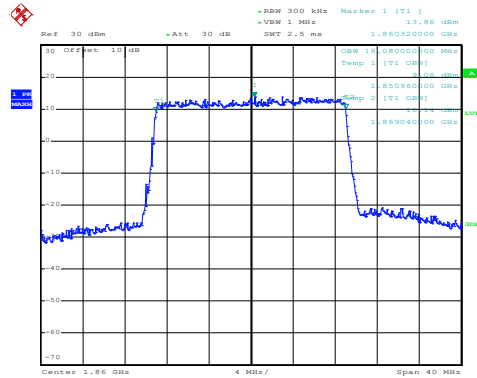
## 99% Occupy bandwidth BW: 20MHz

### 16QAM



Date: 13.OCT.2017 21:54:50

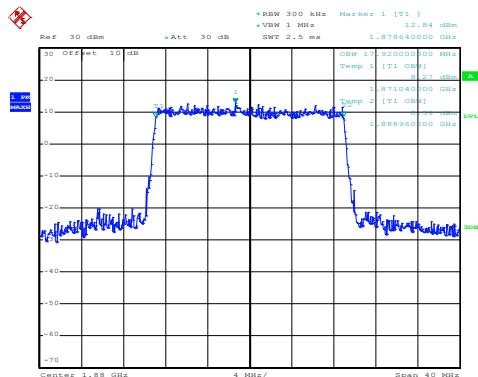
### QPSK



Date: 13.OCT.2017 21:54:46

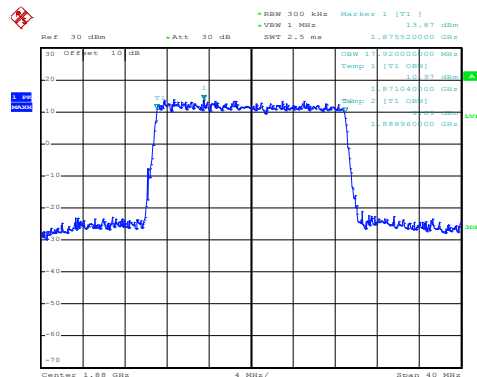
## Lowest channel

### 16QAM



Date: 13.OCT.2017 21:55:28

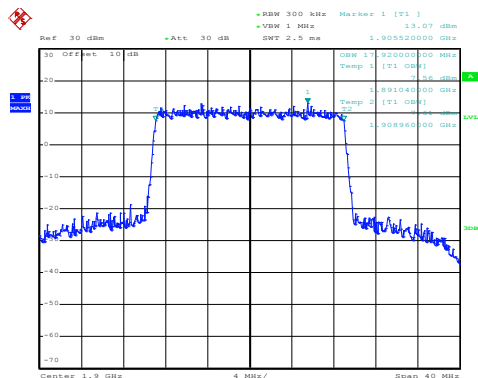
### QPSK



Date: 13.OCT.2017 21:55:24

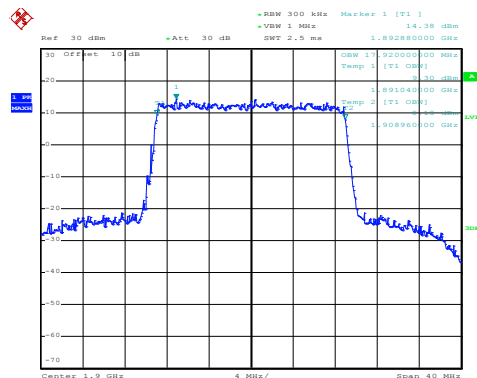
## Middle channel

### 16QAM



Date: 13.OCT.2017 21:55:45

### QPSK

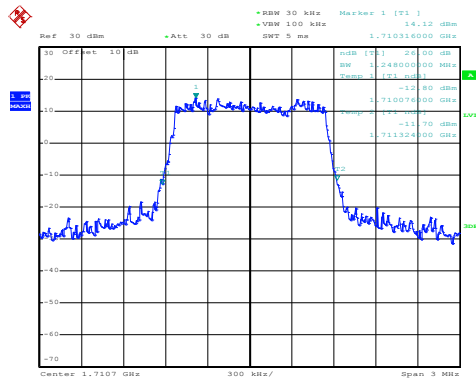


Date: 13.OCT.2017 21:55:41

## Highest channel

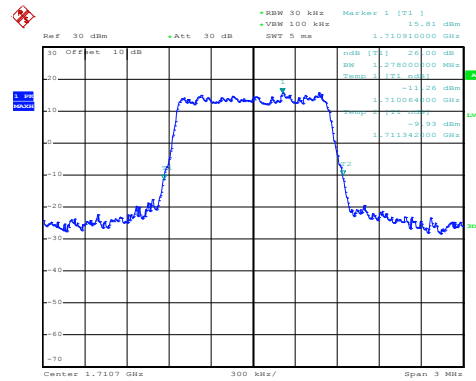
-26dBc bandwidth  
BW: 1.4MHz

## 16QAM



Date: 13.OCT.2017 21:56:37

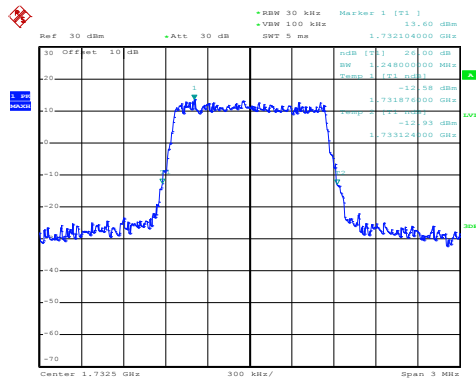
## QPSK



Date: 13.OCT.2017 21:56:33

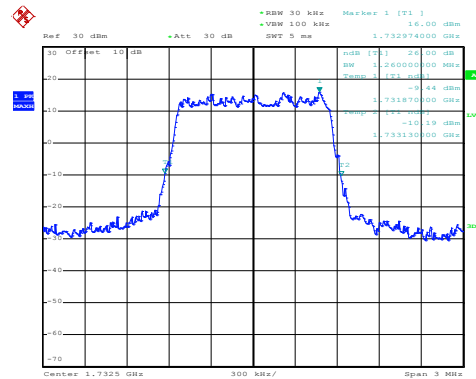
Lowest channel

## 16QAM



Date: 13.OCT.2017 21:57:19

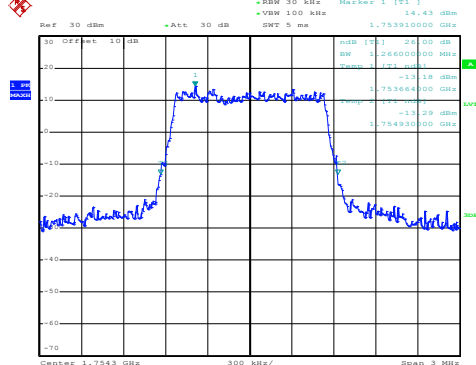
## QPSK



Date: 13.OCT.2017 21:57:15

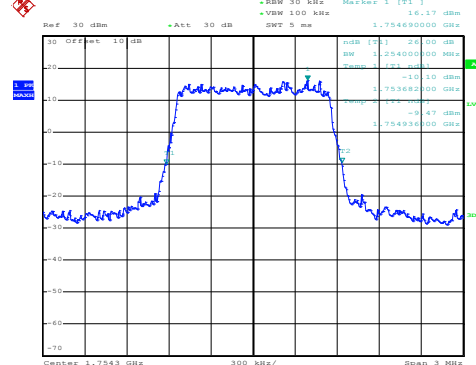
Middle channel

## 16QAM



Date: 13.OCT.2017 21:57:37

## QPSK

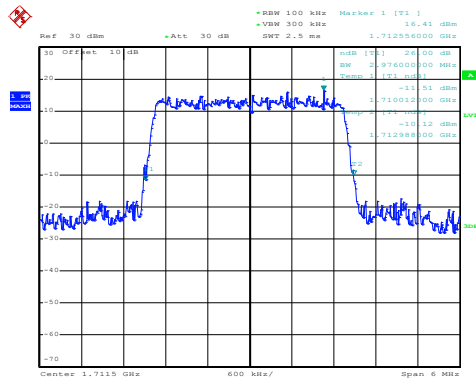


Date: 13.OCT.2017 21:57:34

Highest channel

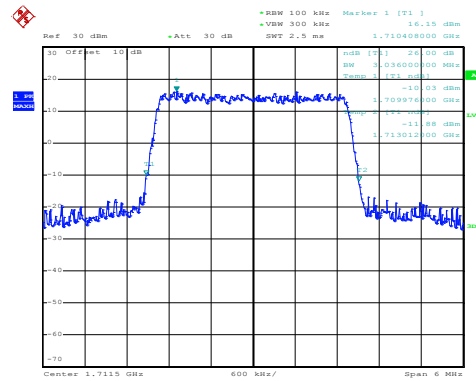
-26dBc bandwidth  
BW: 3MHz

16QAM



Date: 13.OCT.2017 21:58:39

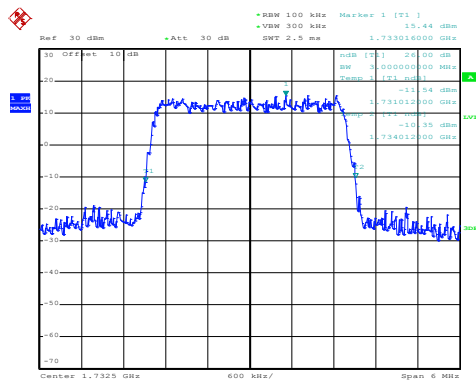
QPSK



Date: 13.OCT.2017 21:58:35

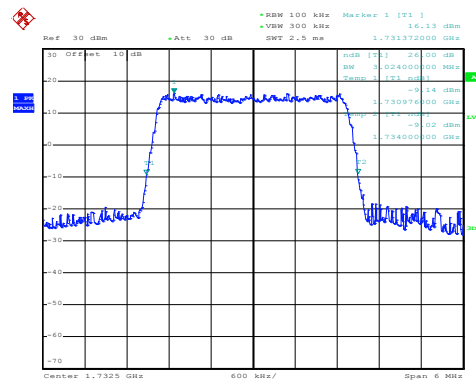
Lowest channel

16QAM



Date: 13.OCT.2017 21:58:59

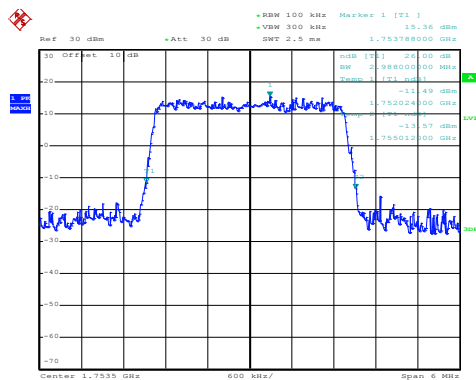
QPSK



Date: 13.OCT.2017 21:58:56

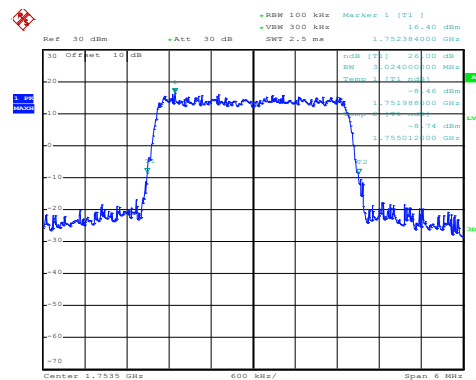
Middle channel

16QAM



Date: 13.OCT.2017 21:59:41

QPSK

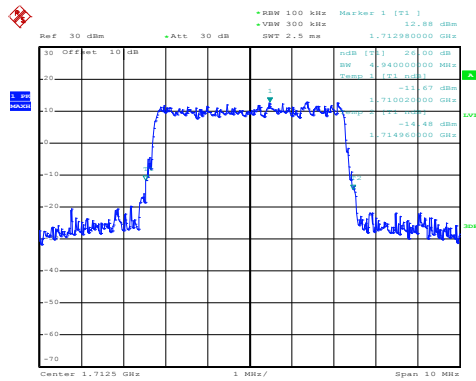


Date: 13.OCT.2017 21:59:37

Highest channel

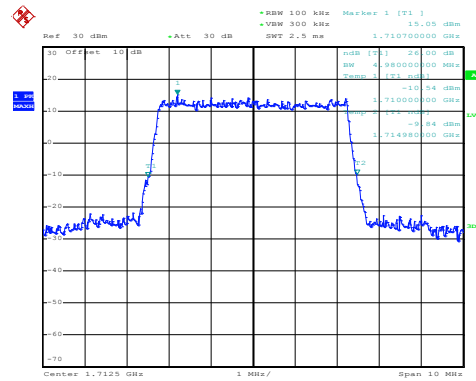
-26dBc bandwidth  
BW: 5MHz

## 16QAM



Date: 13.OCT.2017 22:00:14

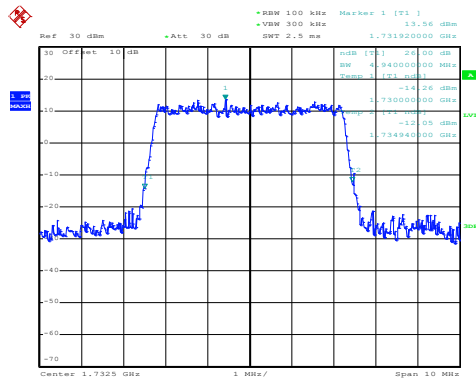
## QPSK



Date: 13.OCT.2017 22:00:10

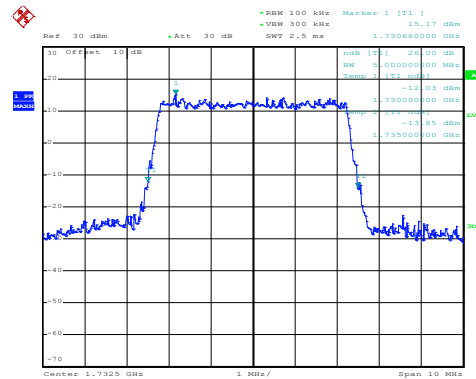
Lowest channel

## 16QAM



Date: 13.OCT.2017 22:01:02

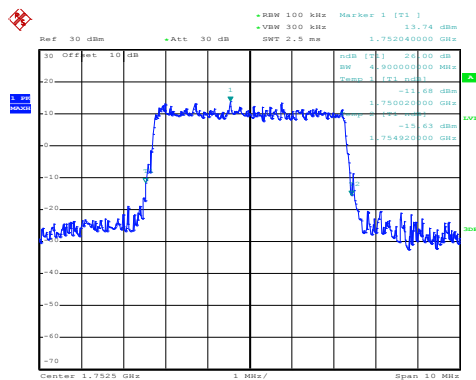
## QPSK



Date: 13.OCT.2017 22:00:57

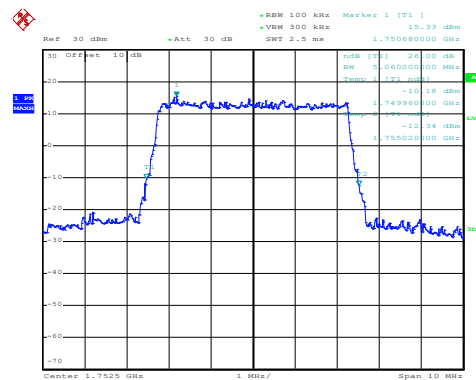
Middle channel

## 16QAM



Date: 13.OCT.2017 22:01:17

## QPSK



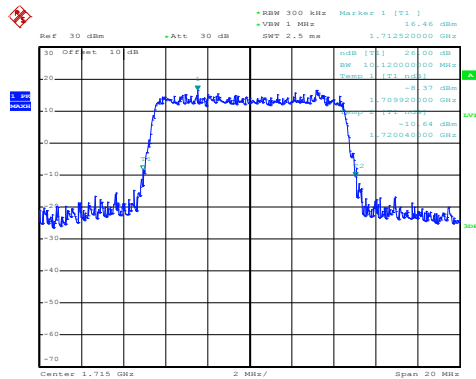
Date: 13.OCT.2017 22:01:49

Highest channel



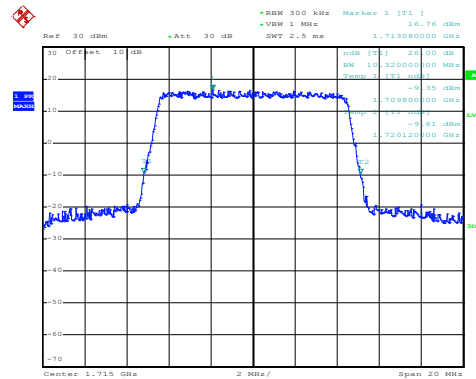
-26dBc bandwidth  
BW: 10MHz

## 16QAM



Date: 13.OCT.2017 22:02:29

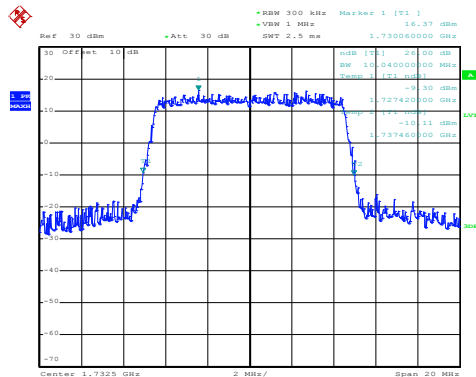
## QPSK



Date: 13.OCT.2017 22:02:24

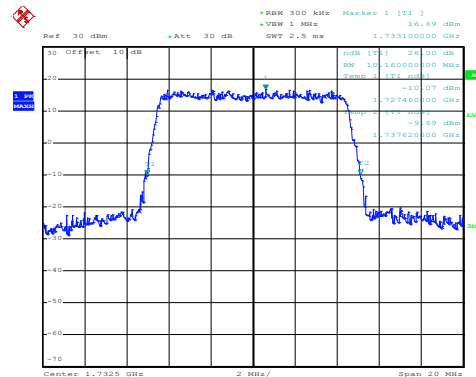
Lowest channel

## 16QAM



Date: 13.OCT.2017 22:03:05

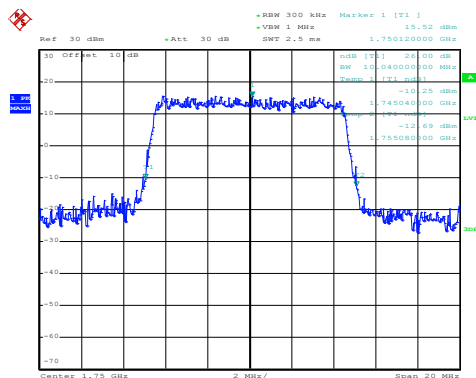
## QPSK



Date: 13.OCT.2017 22:03:01

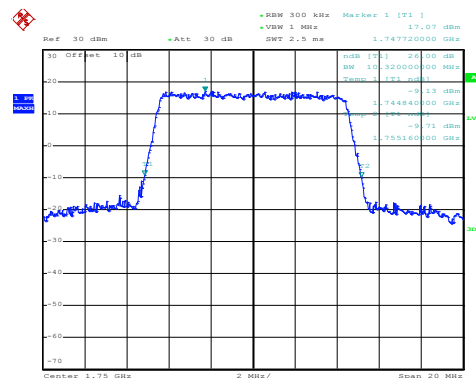
Middle channel

## 16QAM



Date: 13.OCT.2017 22:03:36

## QPSK

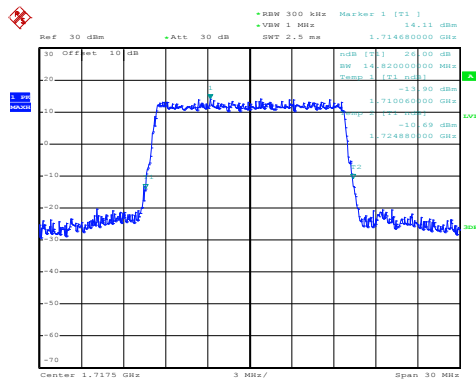


Date: 13.OCT.2017 22:03:33

Highest channel

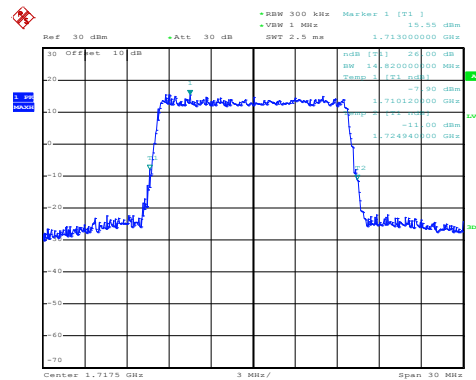
-26dBc bandwidth  
BW: 15MHz

16QAM



Date: 13.OCT.2017 22:04:30

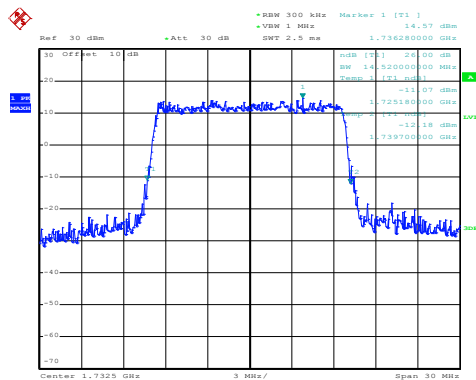
QPSK



Date: 13.OCT.2017 22:04:25

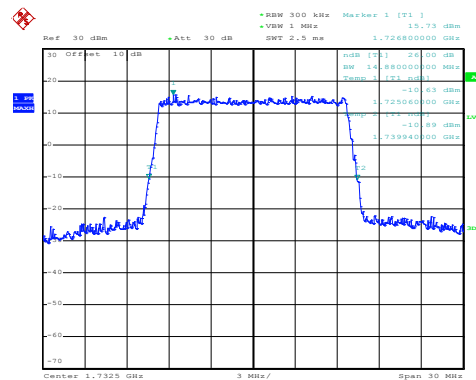
Lowest channel

16QAM



Date: 13.OCT.2017 22:04:49

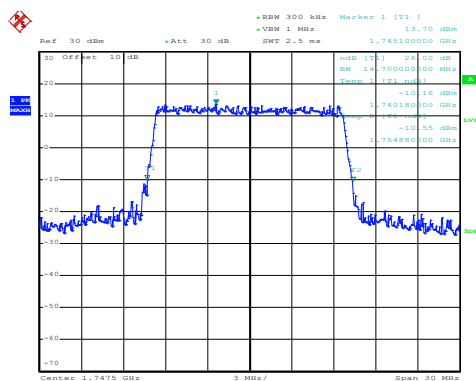
QPSK



Date: 13.OCT.2017 22:04:45

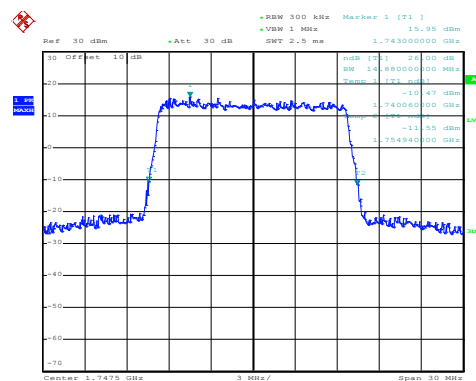
Middle channel

16QAM



Date: 13.OCT.2017 22:05:32

QPSK

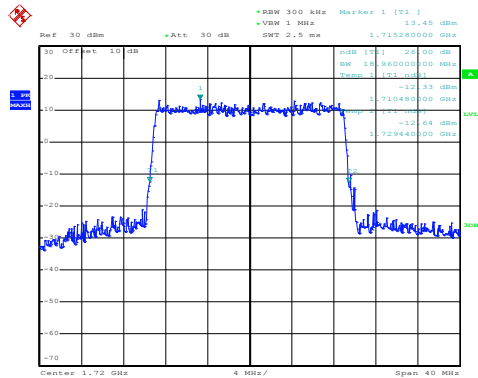


Date: 13.OCT.2017 22:05:27

## Highest channel

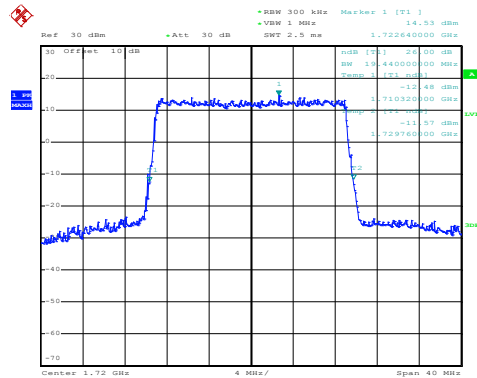
-26dBc bandwidth  
BW: 20MHz

16QAM



Date: 13.OCT.2017 22:05:58

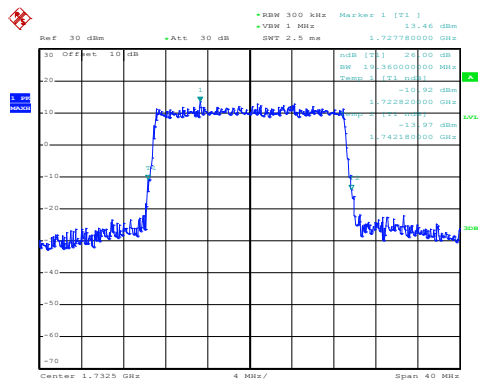
QPSK



Date: 13.OCT.2017 22:05:55

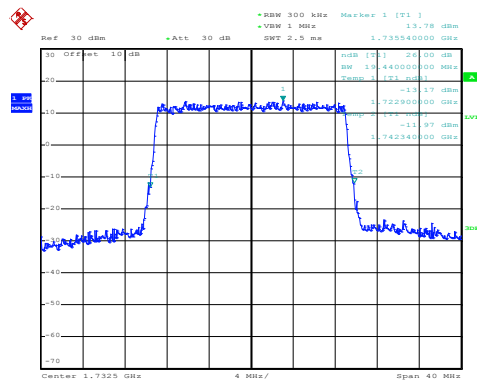
Lowest channel

16QAM



Date: 13.OCT.2017 22:06:35

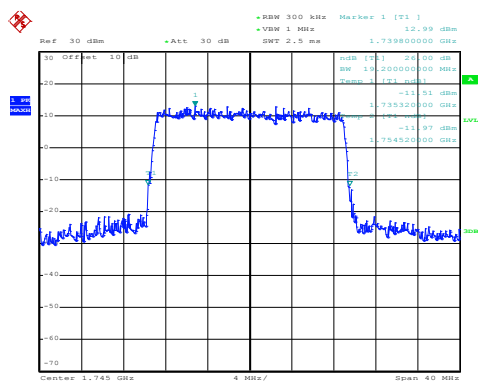
QPSK



Date: 13.OCT.2017 22:06:31

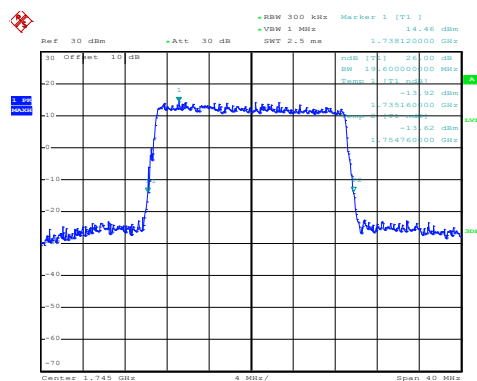
Middle channel

16QAM



Date: 13.OCT.2017 22:06:52

QPSK



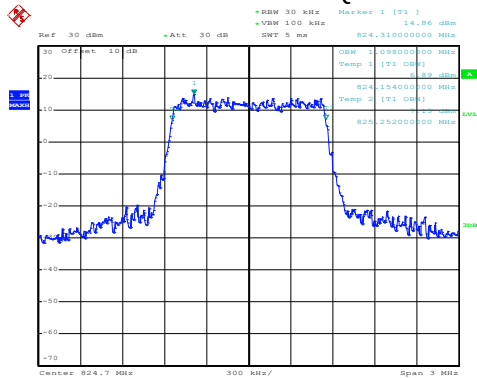
Date: 13.OCT.2017 22:06:49

Highest channel

## LTE Band 5 part

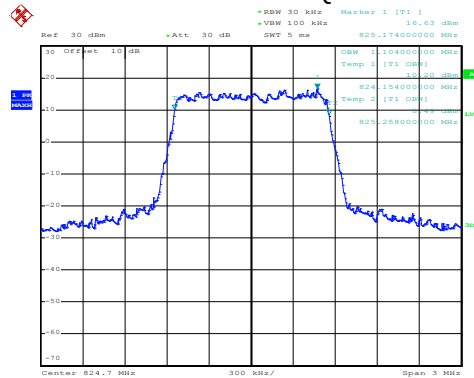
Test Item: 99% Occupancy bandwidth  
BW: 1.4MHz

## Modulation: 16QAM



Date: 13.OCT.2017 22:11:21

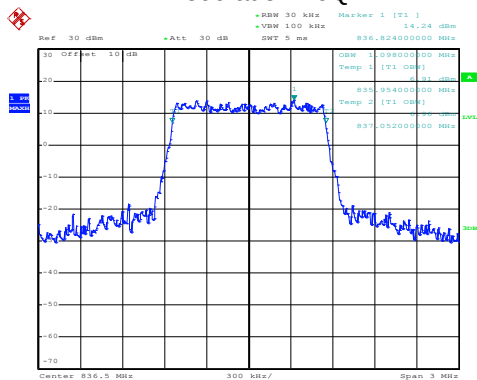
## Modulation: QPSK



Date: 13.OCT.2017 22:11:15

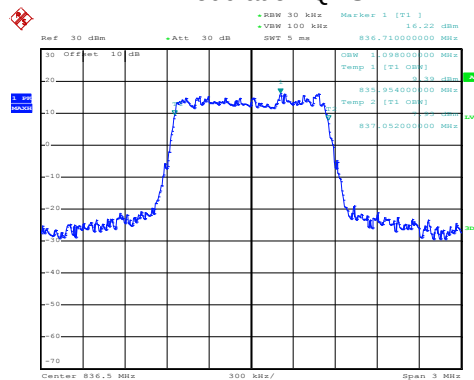
## Lowest channel

## Modulation: 16QAM



Date: 13.OCT.2017 22:11:57

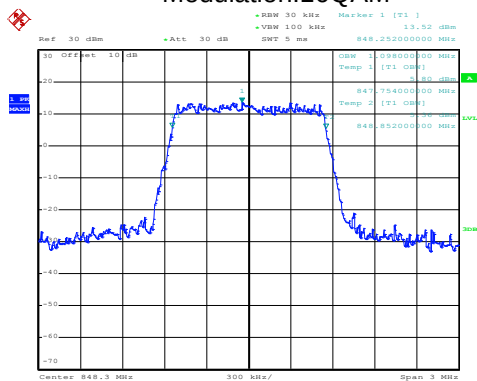
## Modulation: QPSK



Date: 13.OCT.2017 22:11:52

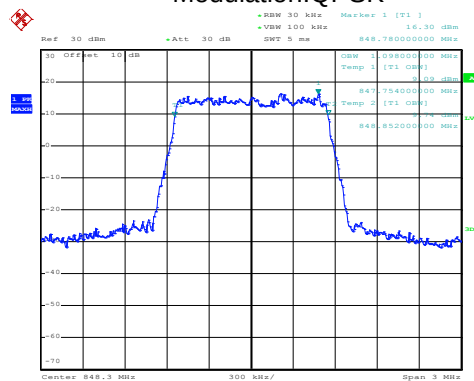
## Middle channel

## Modulation: 16QAM



Date: 13.OCT.2017 22:12:29

## Modulation: QPSK

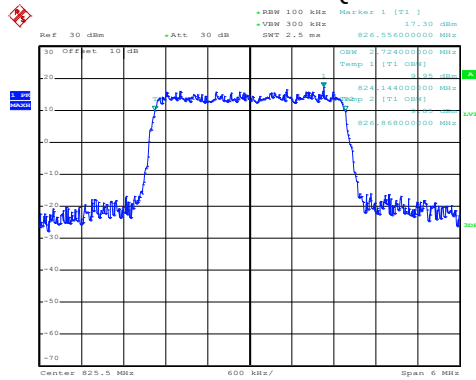


Date: 13.OCT.2017 22:12:24

## Highest channel

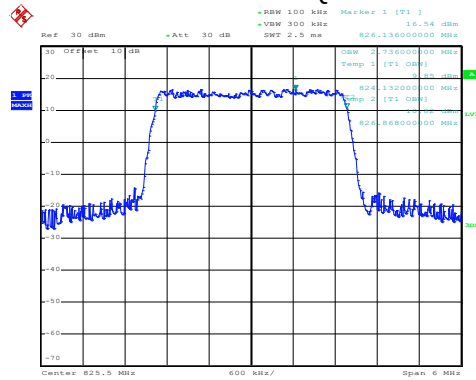
Test Item: 99% Occupancy bandwidth  
BW: 3MHz

Modulation: 16QAM



Date: 13.OCT.2017 22:16:56

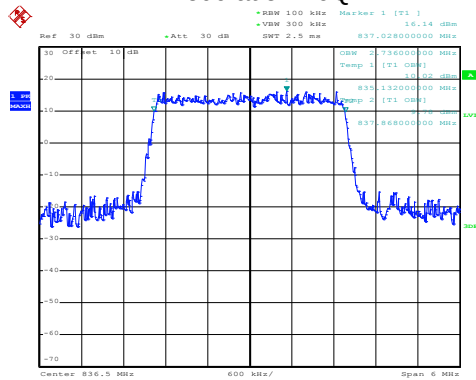
Modulation: QPSK



Date: 13.OCT.2017 22:16:49

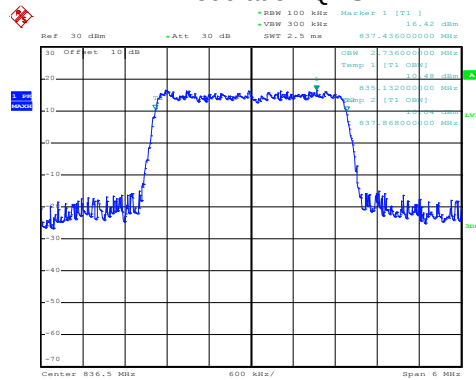
Lowest channel

Modulation: 16QAM



Date: 13.OCT.2017 22:17:35

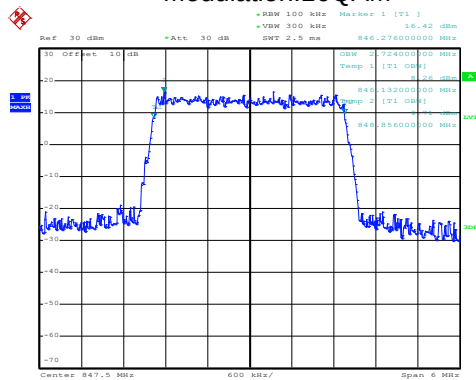
Modulation: QPSK



Date: 13.OCT.2017 22:17:31

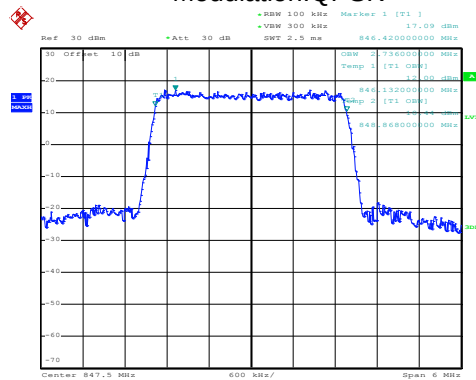
Middle channel

Modulation: 16QAM



Date: 13.OCT.2017 22:18:34

Modulation: QPSK

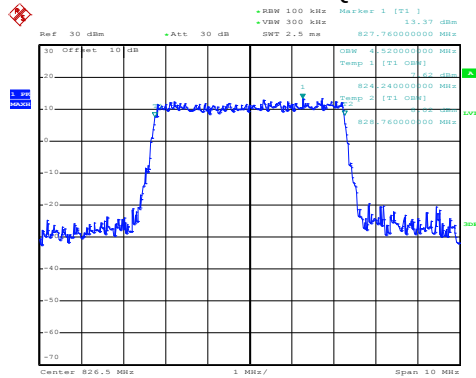


Date: 13.OCT.2017 22:18:28

Highest channel

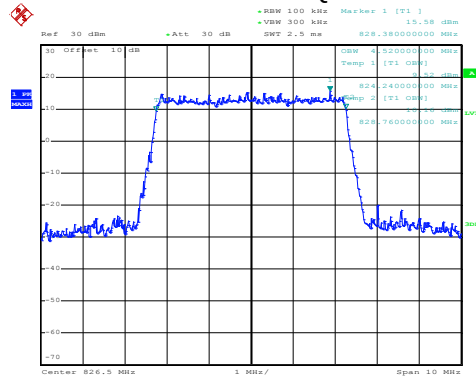
Test Item:99% Occupy bandwidth  
BW: 5MHz

Modulation:16QAM



Date: 13.OCT.2017 22:19:02

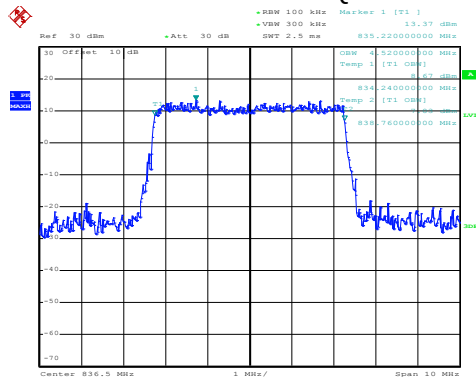
Modulation:QPSK



Date: 13.OCT.2017 22:18:58

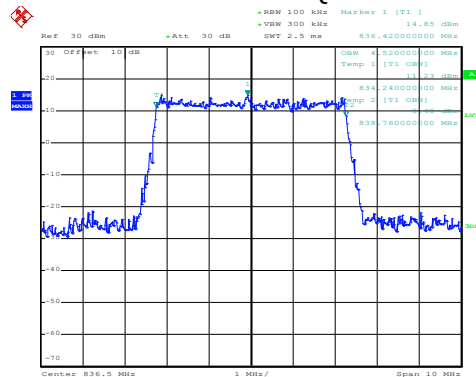
Lowest channel

Modulation:16QAM



Date: 13.OCT.2017 22:19:38

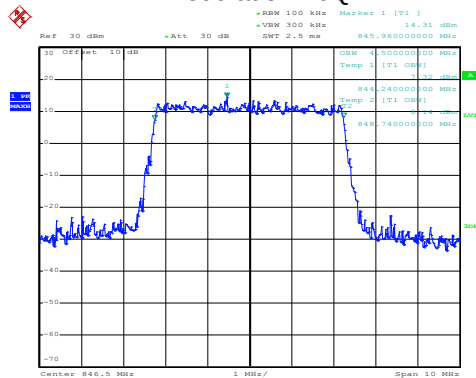
Modulation:QPSK



Date: 13.OCT.2017 22:19:34

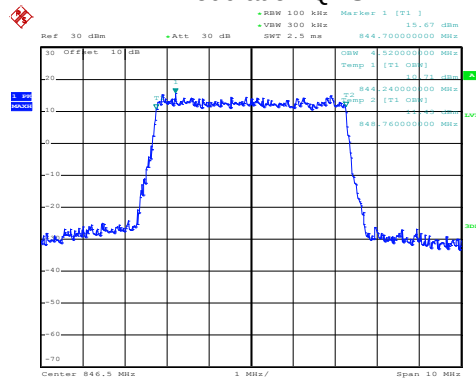
Middle channel

Modulation:16QAM



Date: 13.OCT.2017 22:19:57

Modulation:QPSK

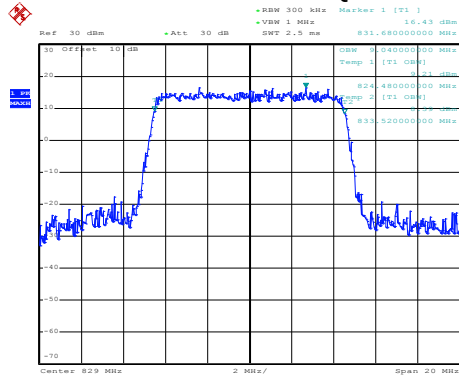


Date: 13.OCT.2017 22:19:53

Highest channel

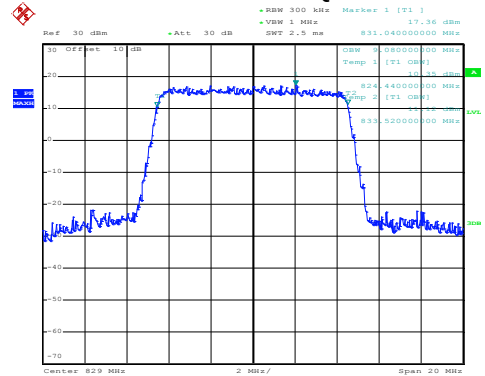
Test Item: 99% Occupancy bandwidth  
BW: 10MHz

Modulation: 16QAM



Date: 13.OCT.2017 22:20:55

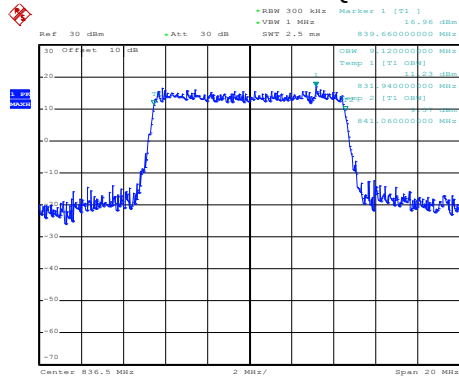
Modulation: QPSK



Date: 13.OCT.2017 22:20:50

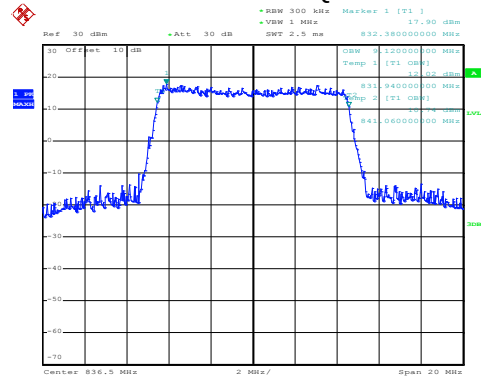
Lowest channel

Modulation: 16QAM



Date: 13.OCT.2017 22:21:13

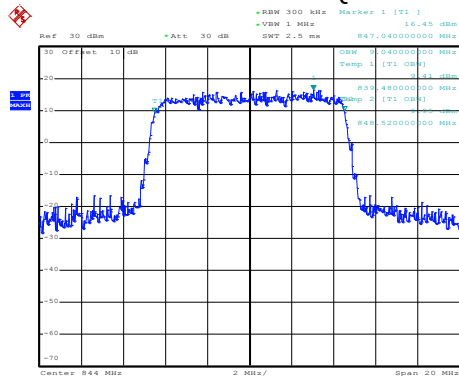
Modulation: QPSK



Date: 13.OCT.2017 22:22:12

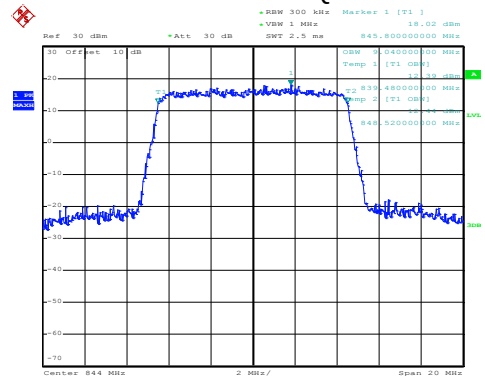
Middle channel

Modulation: 16QAM



Date: 13.OCT.2017 22:22:35

Modulation: QPSK

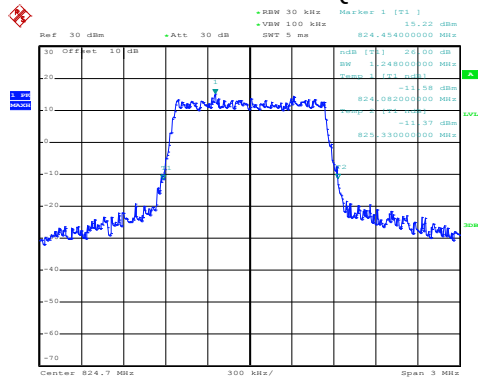


Date: 13.OCT.2017 22:22:32

Highest channel

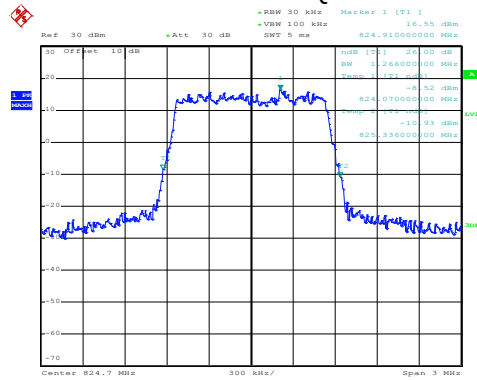
Test Item:-26dBc bandwidth  
BW: 1.4MHz

Modulation:16QAM



Date: 13.OCT.2017 22:11:30

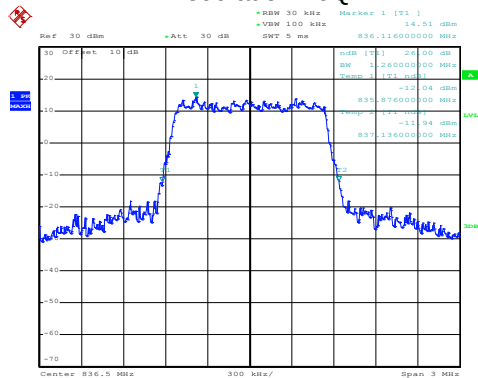
Modulation:QPSK



Date: 13.OCT.2017 22:11:27

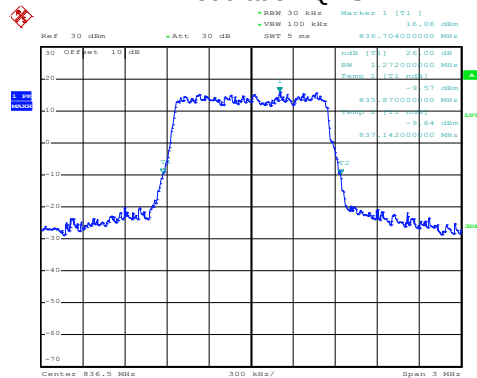
Lowest channel

Modulation:16QAM



Date: 13.OCT.2017 22:11:46

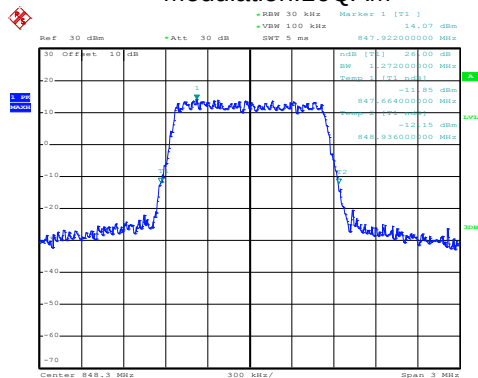
Modulation:QPSK



Date: 13.OCT.2017 22:11:42

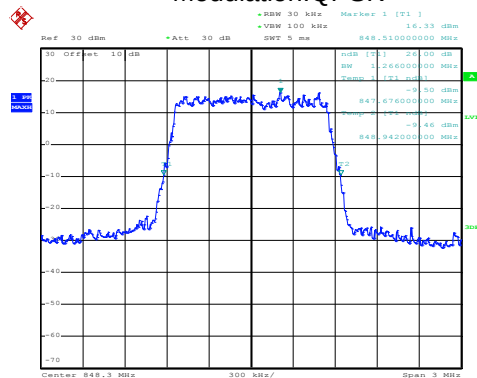
Middle channel

Modulation:16QAM



Date: 13.OCT.2017 22:12:38

Modulation:QPSK

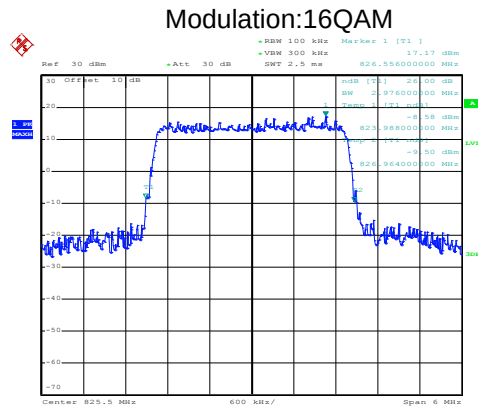


Date: 13.OCT.2017 22:12:34

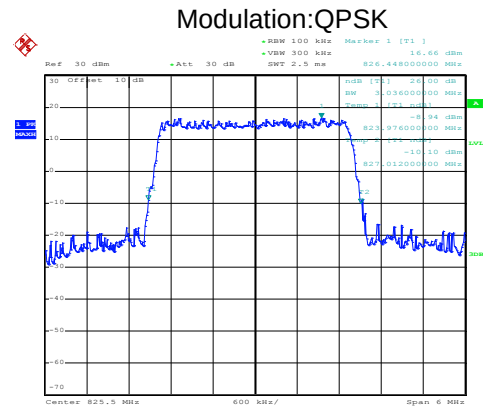
Highest channel



Test Item:-26dBc bandwidth  
BW: 3MHz

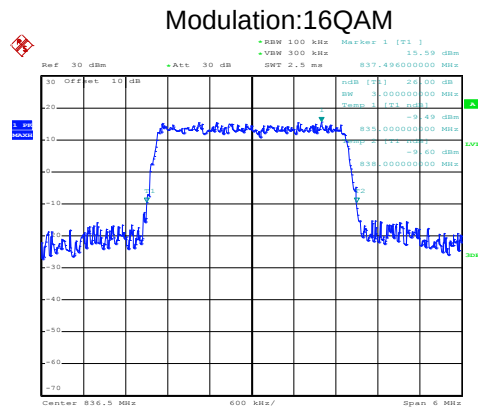


Date: 13.OCT.2017 22:17:08

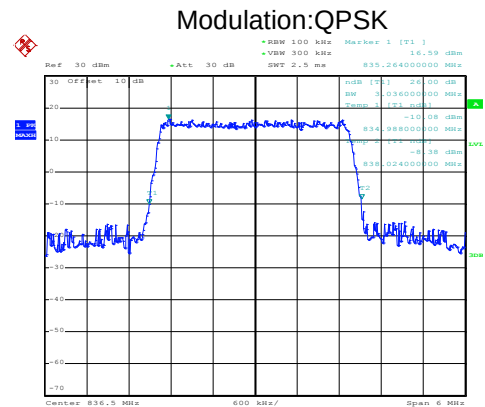


Date: 13.OCT.2017 22:17:03

Lowest channel

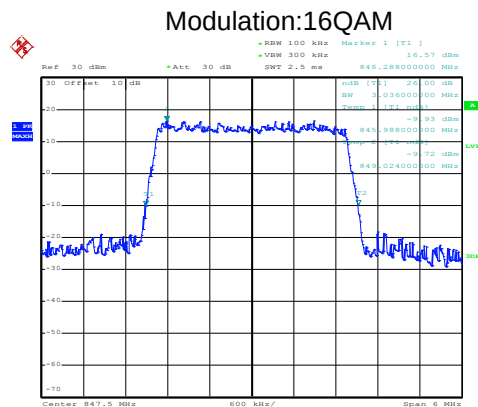


Date: 13.OCT.2017 22:17:25

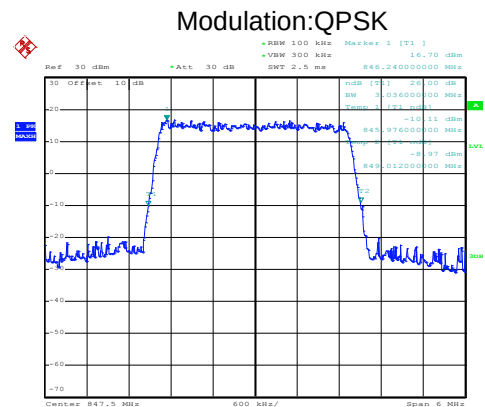


Date: 13.OCT.2017 22:17:20

Middle channel



Date: 13.OCT.2017 22:18:09

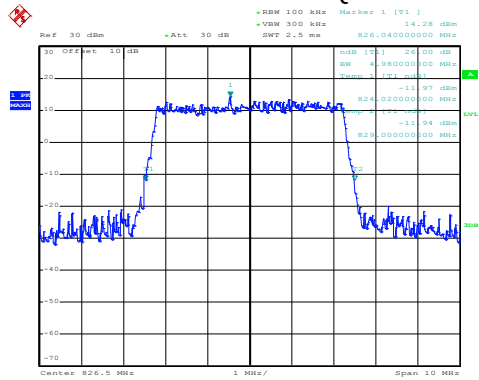


Date: 13.OCT.2017 22:18:02

Highest channel

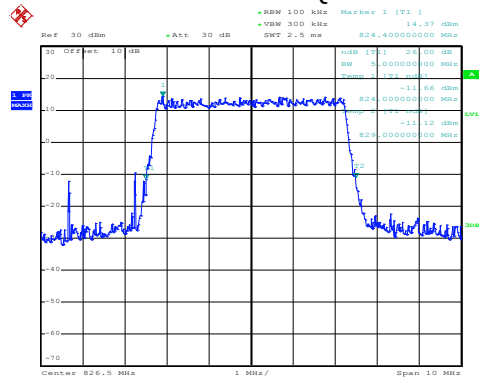
Test Item:-26dBc bandwidth  
BW: 5MHz

Modulation:16QAM



Date: 13.OCT.2017 22:19:13

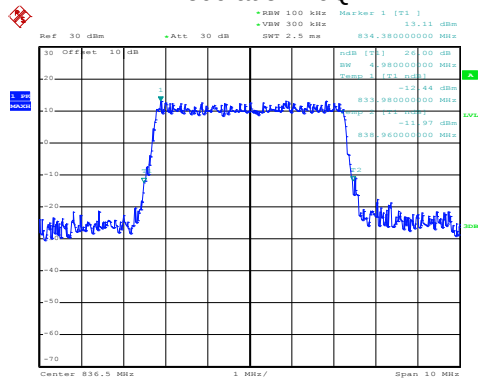
Modulation:QPSK



Date: 13.OCT.2017 22:19:08

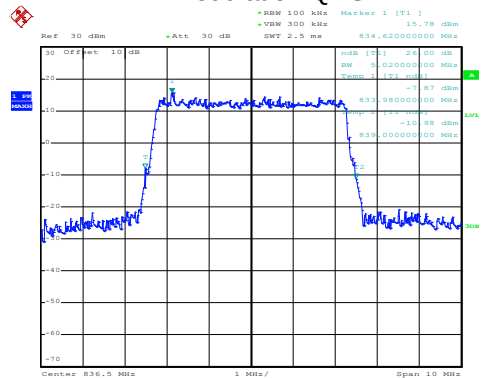
Lowest channel

Modulation:16QAM



Date: 13.OCT.2017 22:19:28

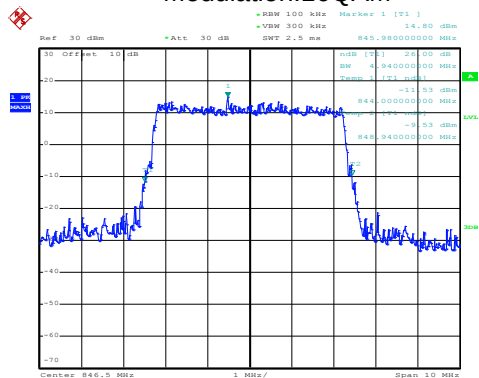
Modulation:QPSK



Date: 13.OCT.2017 22:19:25

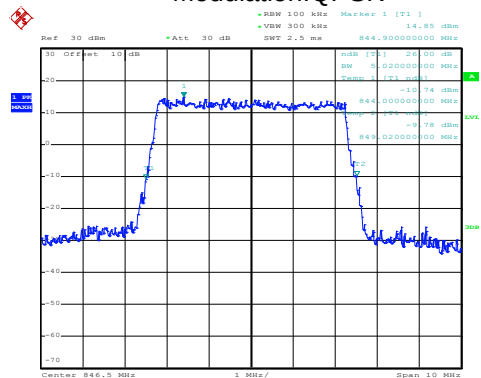
Middle channel

Modulation:16QAM



Date: 13.OCT.2017 22:20:06

Modulation:QPSK

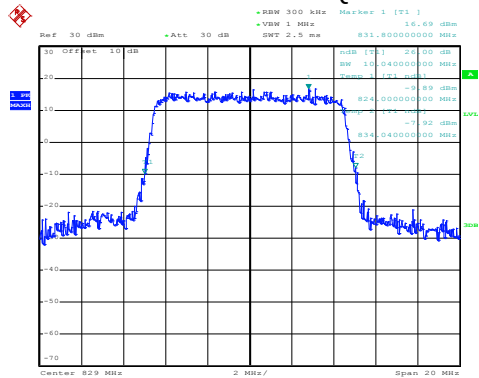


Date: 13.OCT.2017 22:20:03

Highest channel

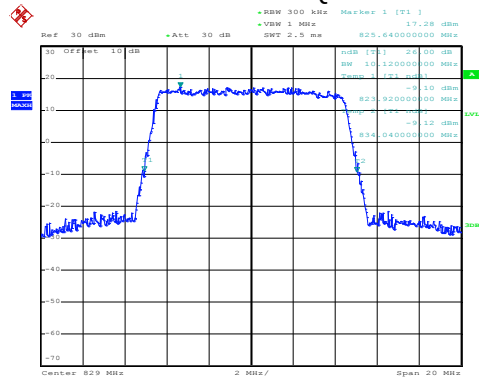
Test Item:-26dBc bandwidth  
BW: 10MHz

Modulation:16QAM



Date: 13.OCT.2017 22:20:43

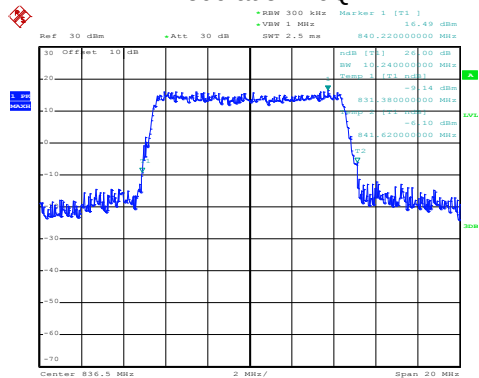
Modulation:QPSK



Date: 13.OCT.2017 22:20:39

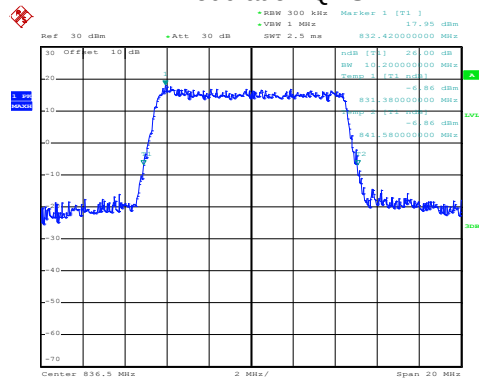
Lowest channel

Modulation:16QAM



Date: 13.OCT.2017 22:21:24

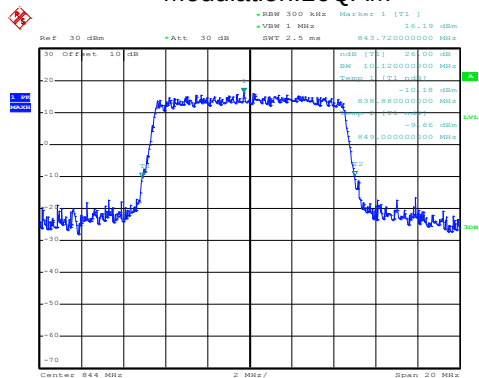
Modulation:QPSK



Date: 13.OCT.2017 22:21:19

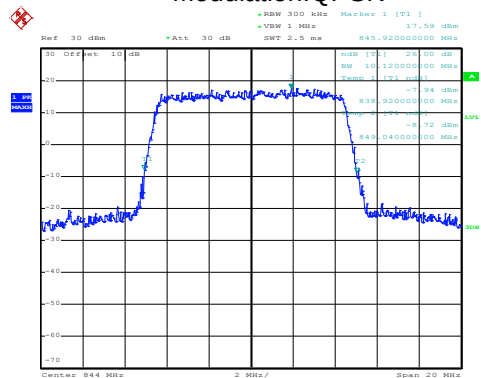
Middle channel

Modulation:16QAM



Date: 13.OCT.2017 22:22:44

Modulation:QPSK



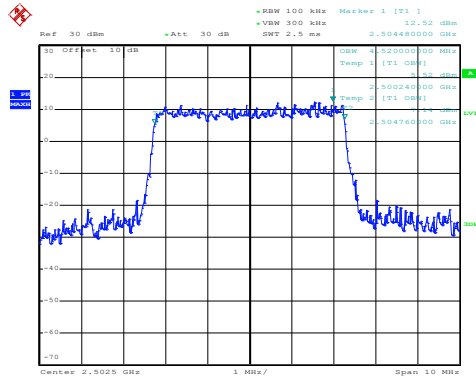
Date: 13.OCT.2017 22:22:41

Highest channel

## LTE-Band 7 part

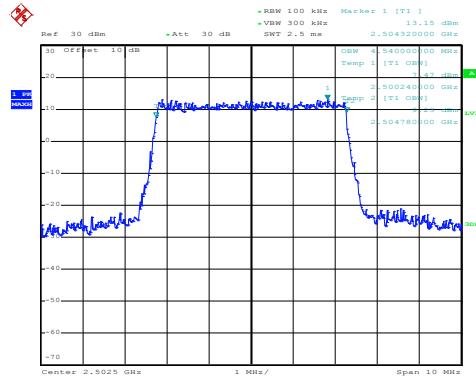
99% Occupancy bandwidth  
BW: 5MHz

### 16QAM



Date: 13.OCT.2017 22:23:28

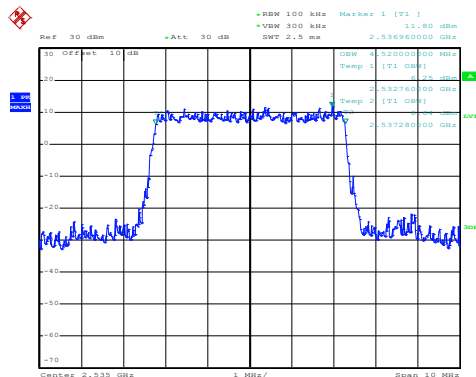
### QPSK



Date: 13.OCT.2017 22:23:25

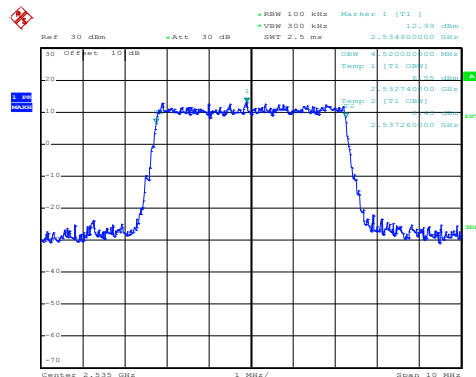
## Lowest channel

### 16QAM



Date: 13.OCT.2017 22:23:42

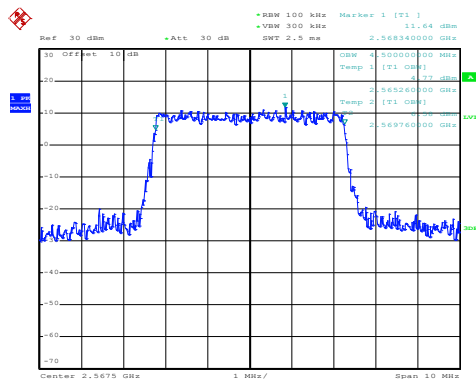
### QPSK



Date: 13.OCT.2017 22:23:39

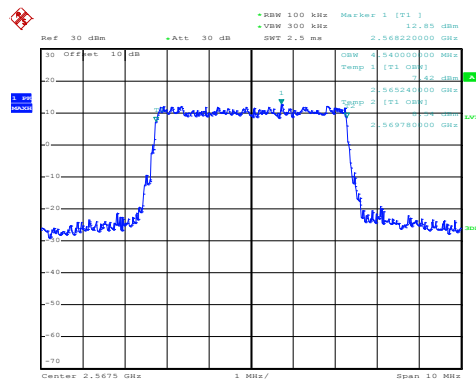
## Middle channel

### 16QAM



Date: 13.OCT.2017 22:24:17

### QPSK

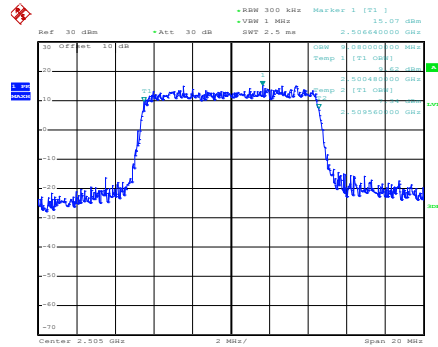


Date: 13.OCT.2017 22:24:13

## Highest channel

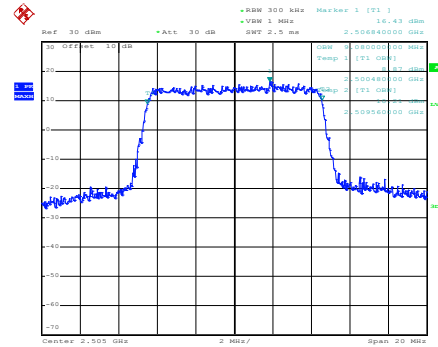
99% Occupancy bandwidth  
BW: 10MHz

16QAM



Date: 13.OCT.2017 22:25:04

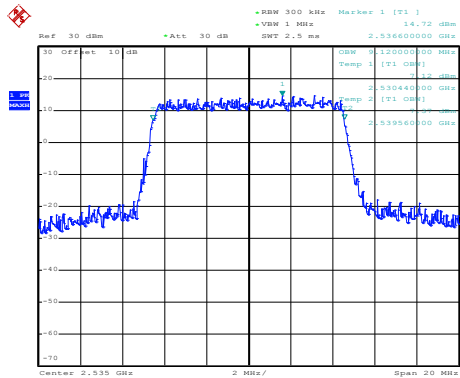
QPSK



Date: 13.OCT.2017 22:25:01

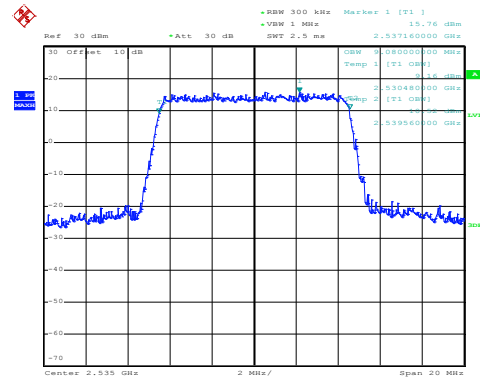
Lowest channel

16QAM



Date: 13.OCT.2017 22:25:21

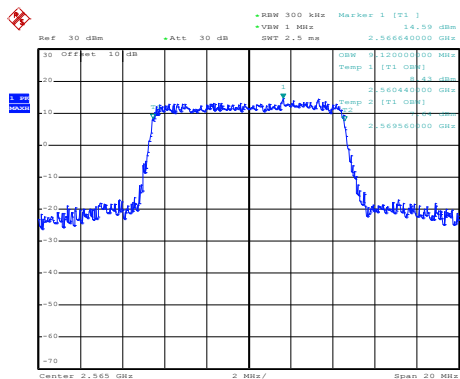
QPSK



Date: 13.OCT.2017 22:25:17

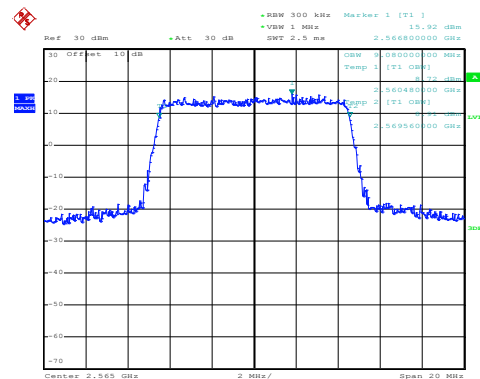
Middle channel

16QAM



Date: 13.OCT.2017 22:26:03

QPSK

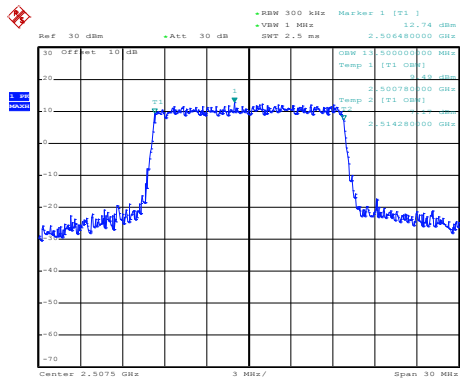


Date: 13.OCT.2017 22:25:59

Highest channel

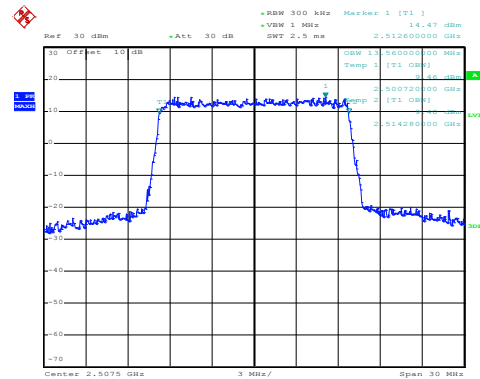
99% Occupy bandwidth  
BW: 15MHz

16QAM



Date: 13.OCT.2017 22:26:25

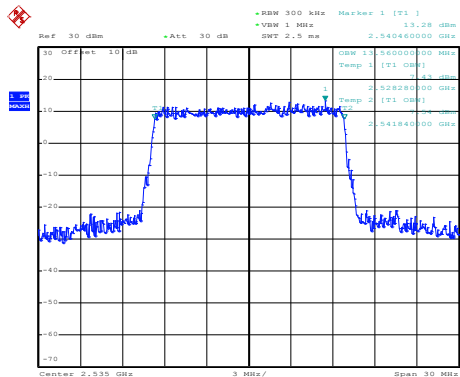
QPSK



Date: 13.OCT.2017 22:26:22

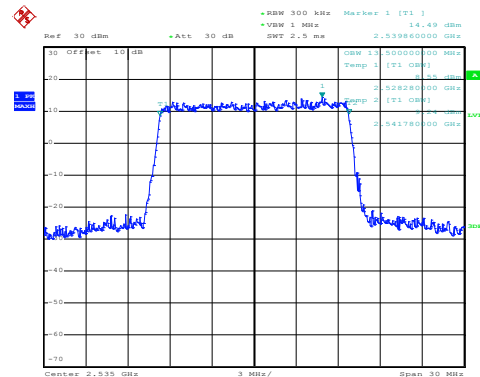
Lowest channel

16QAM



Date: 13.OCT.2017 22:30:25

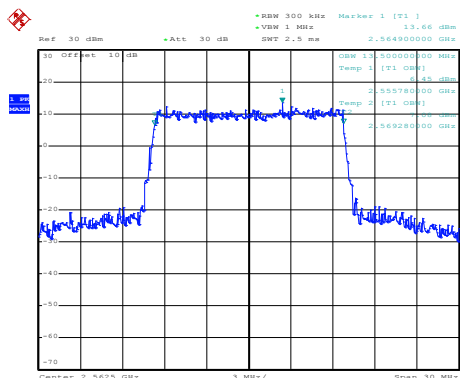
QPSK



Date: 13.OCT.2017 22:30:22

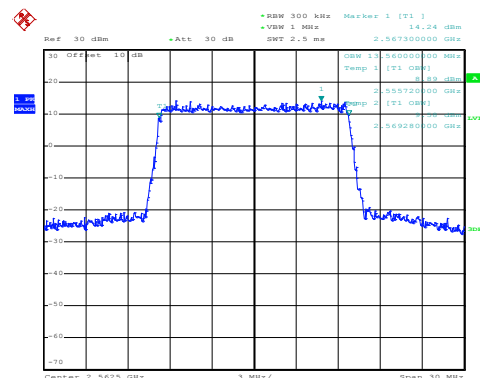
Middle channel

16QAM



Date: 13.OCT.2017 22:31:01

QPSK

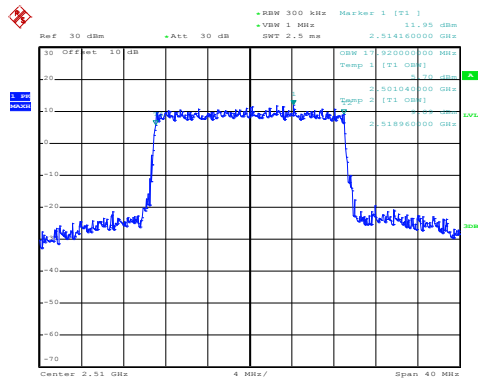


Date: 13.OCT.2017 22:30:58

Highest channel

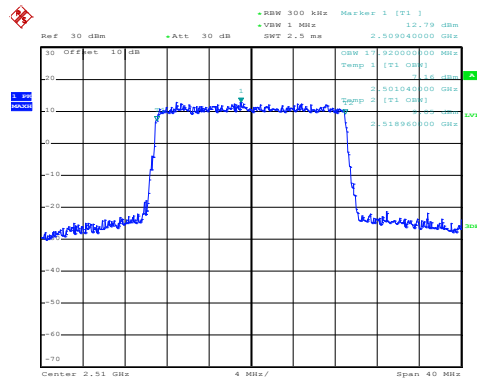
## 99% Occupy bandwidth BW: 20MHz

### 16QAM



Date: 13.OCT.2017 22:31:53

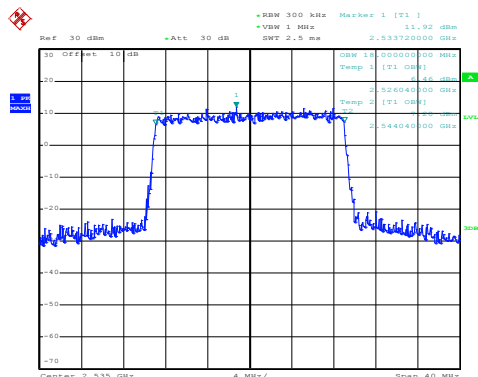
### QPSK



Date: 13.OCT.2017 22:31:50

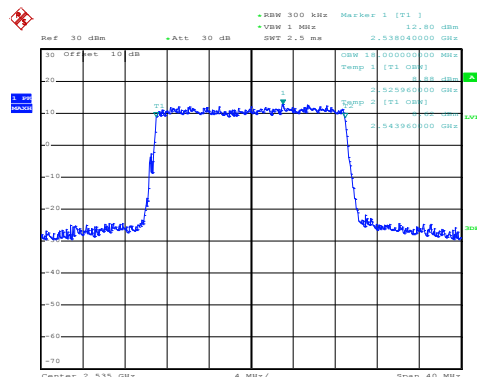
## Lowest channel

### 16QAM



Date: 13.OCT.2017 22:32:15

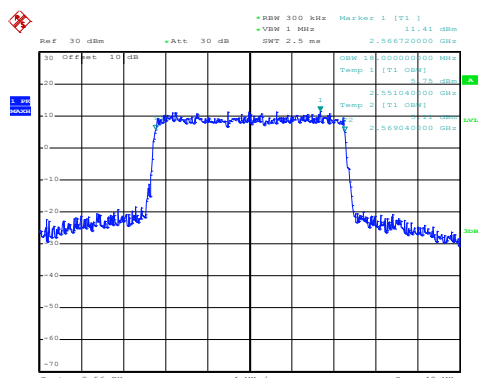
### QPSK



Date: 13.OCT.2017 22:32:11

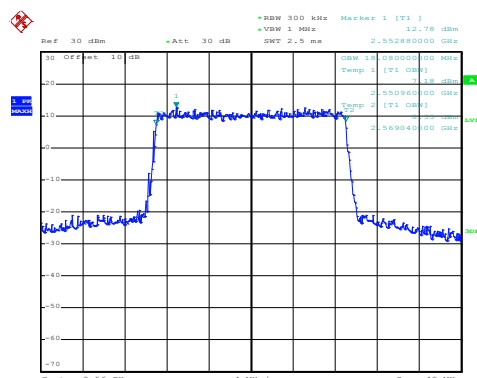
## Middle channel

### 16QAM



Date: 13.OCT.2017 22:32:57

### QPSK

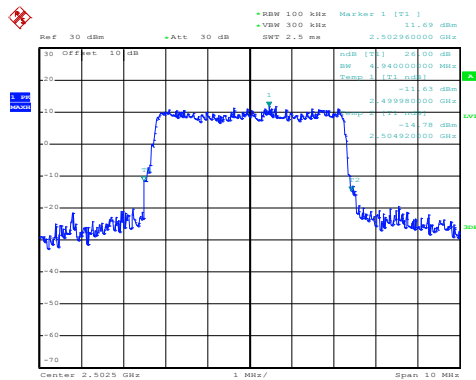


Date: 13.OCT.2017 22:32:53

## Highest channel

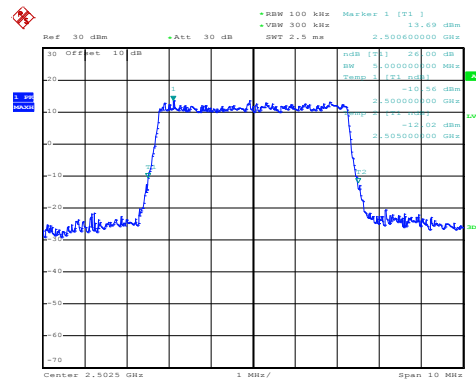
-26dBc bandwidth  
BW: 5MHz

## 16QAM



Date: 13.OCT.2017 22:23:17

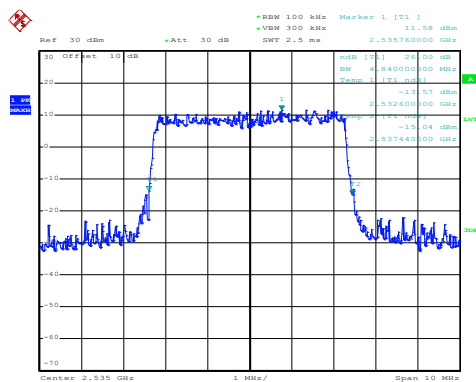
## QPSK



Date: 13.OCT.2017 22:23:13

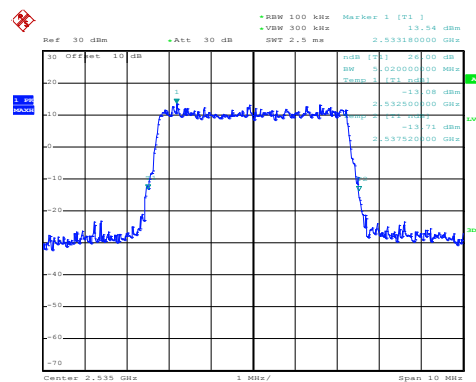
## Lowest channel

## 16QAM



Date: 13.OCT.2017 22:23:51

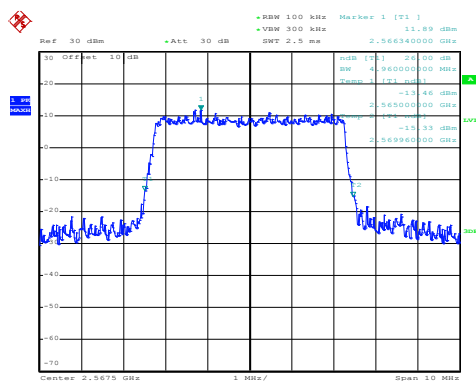
## QPSK



Date: 13.OCT.2017 22:23:48

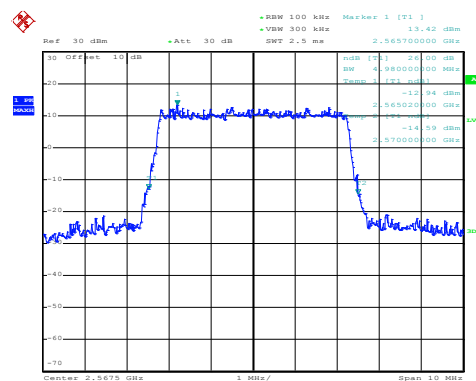
## Middle channel

## 16QAM



Date: 13.OCT.2017 22:24:07

## QPSK



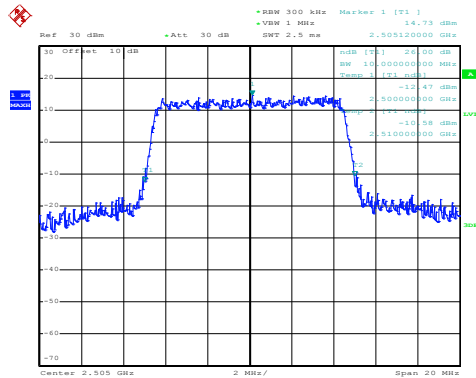
Date: 13.OCT.2017 22:24:24

## Highest channel



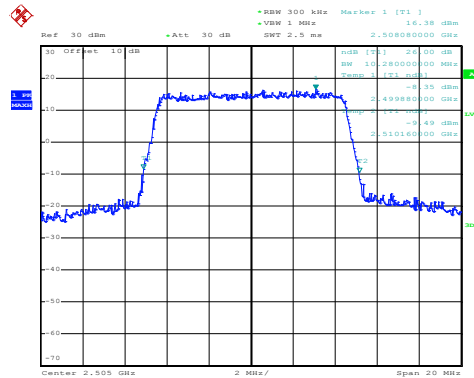
-26dBc bandwidth  
BW: 10MHz

16QAM



Date: 13.OCT.2017 22:24:56

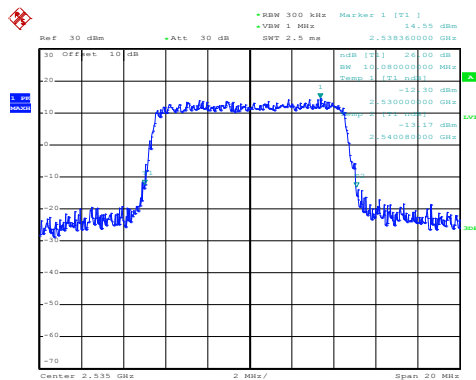
QPSK



Date: 13.OCT.2017 22:24:52

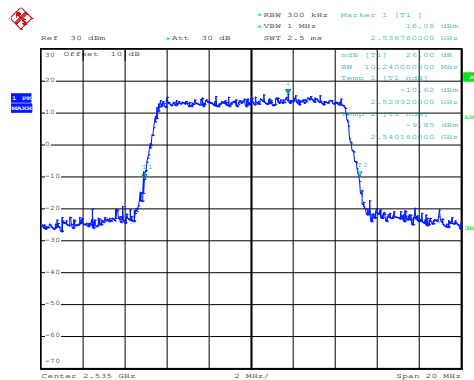
Lowest channel

16QAM



Date: 13.OCT.2017 22:25:35

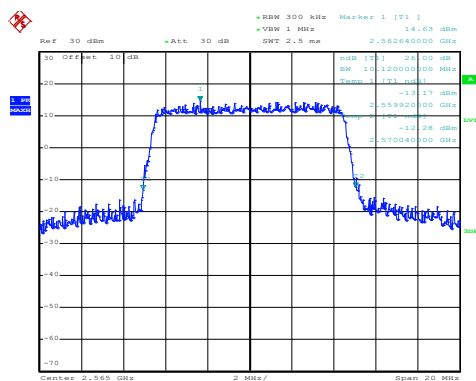
QPSK



Date: 13.OCT.2017 22:25:29

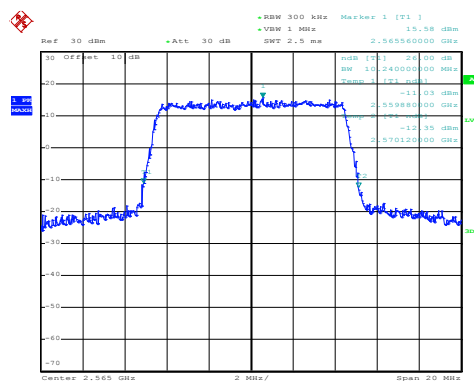
Middle channel

16QAM



Date: 13.OCT.2017 22:25:52

QPSK

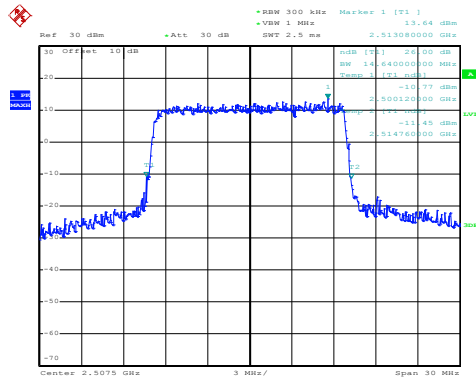


Date: 13.OCT.2017 22:25:48

Highest channel

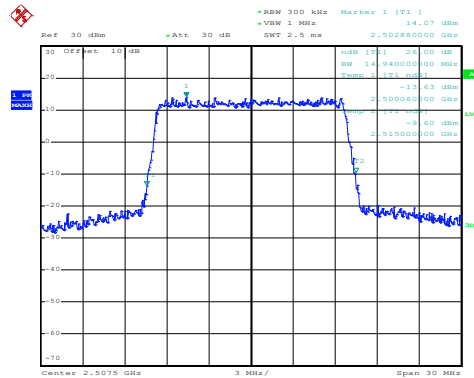
-26dBc bandwidth  
BW: 15MHz

16QAM



Date: 13.OCT.2017 22:26:34

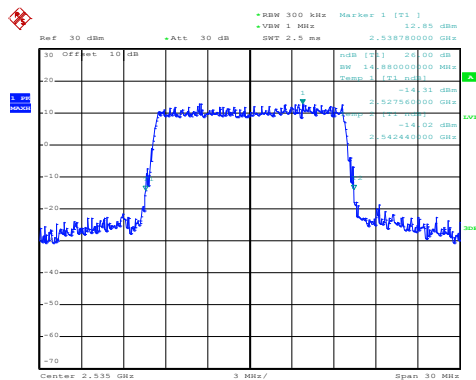
QPSK



Date: 13.OCT.2017 22:26:31

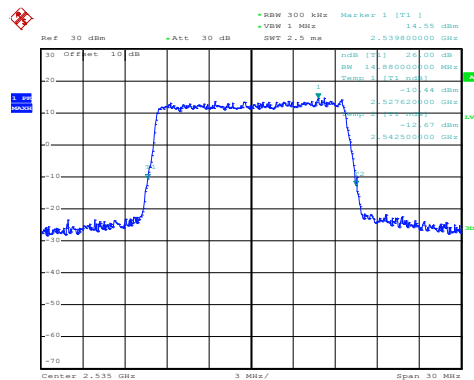
Lowest channel

16QAM



Date: 13.OCT.2017 22:30:16

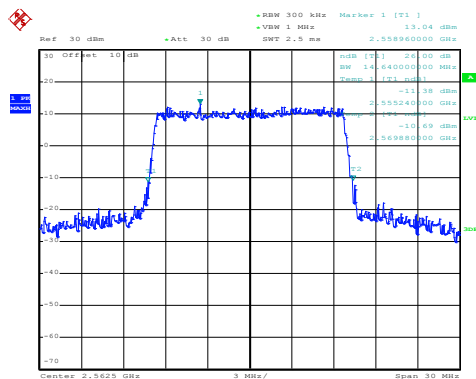
QPSK



Date: 13.OCT.2017 22:30:13

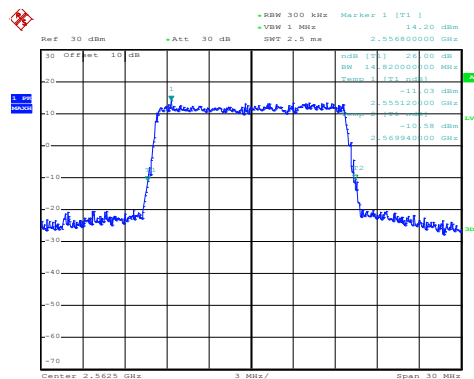
Middle channel

16QAM



Date: 13.OCT.2017 22:31:10

QPSK

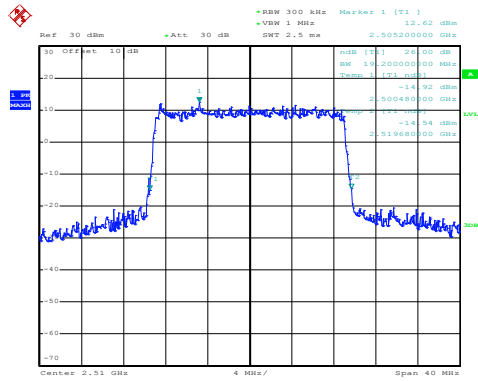


Date: 13.OCT.2017 22:31:07

Highest channel

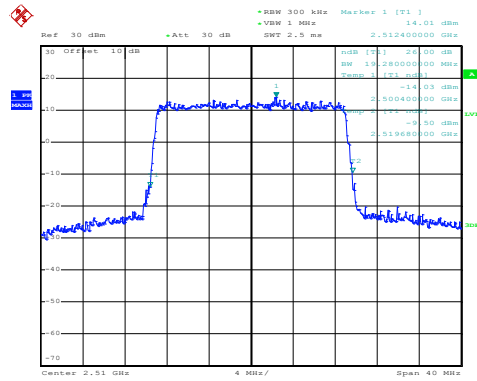
-26dBc bandwidth  
BW: 20MHz

16QAM



Date: 13.OCT.2017 22:31:44

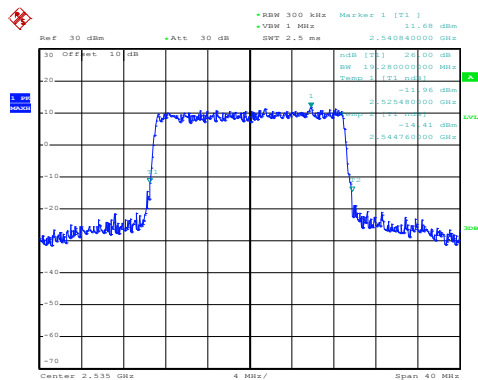
QPSK



Date: 13.OCT.2017 22:31:39

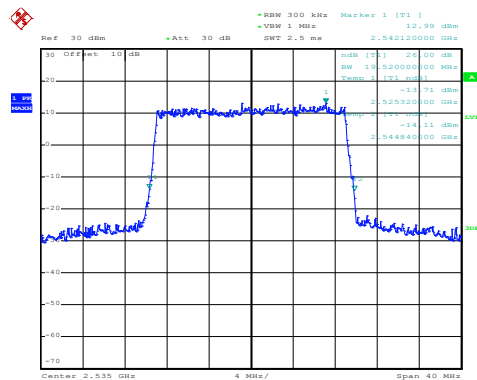
Lowest channel

16QAM



Date: 13.OCT.2017 22:32:25

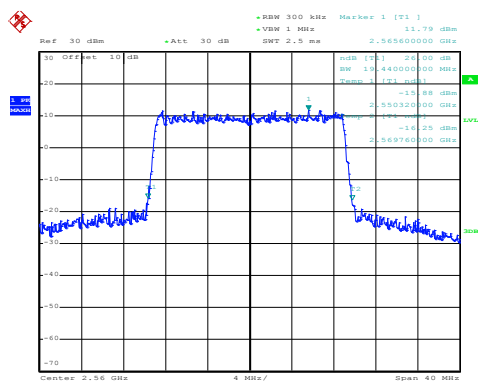
QPSK



Date: 13.OCT.2017 22:32:20

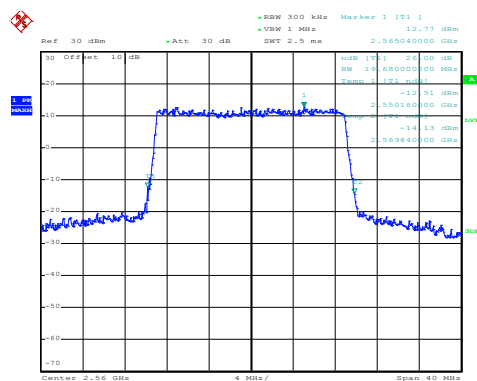
Middle channel

16QAM



Date: 13.OCT.2017 22:32:46

QPSK



Date: 13.OCT.2017 22:32:41

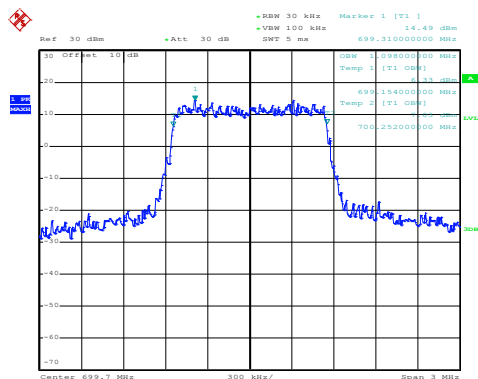
Highest channel

## LTE-Band 12 part

Test Item:99% Occupy bandwidth

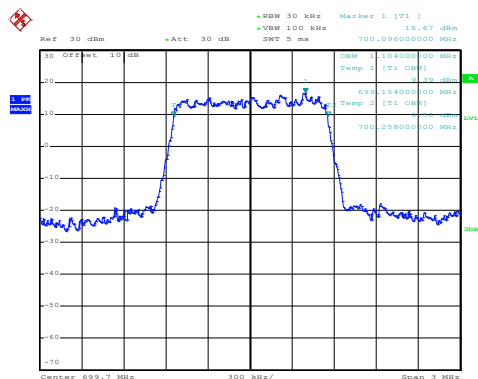
BW: 1.4MHz

Modulation:16QAM



Date: 13.OCT.2017 22:33:47

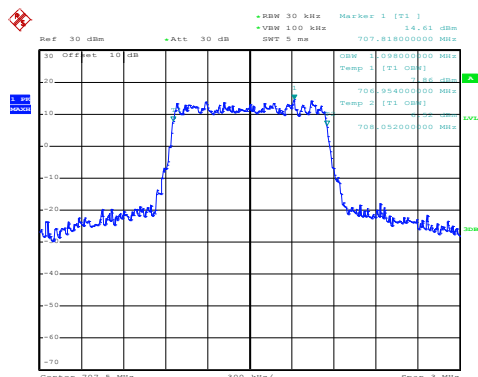
Modulation:QPSK



Date: 13.OCT.2017 22:33:43

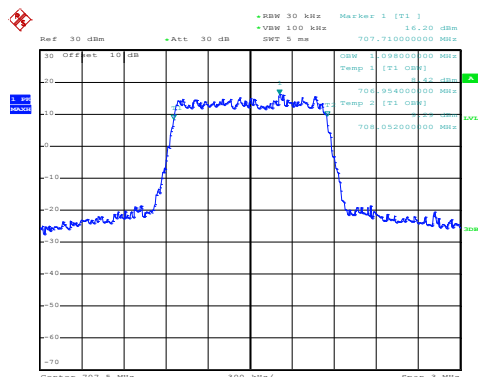
Lowest channel

Modulation:16QAM



Date: 13.OCT.2017 22:34:23

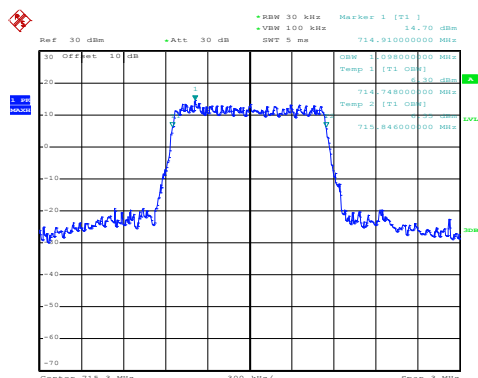
Modulation:QPSK



Date: 13.OCT.2017 22:34:19

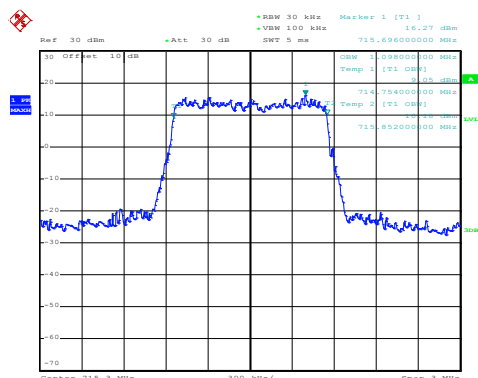
Middle channel

Modulation:16QAM



Date: 13.OCT.2017 22:35:14

Modulation:QPSK

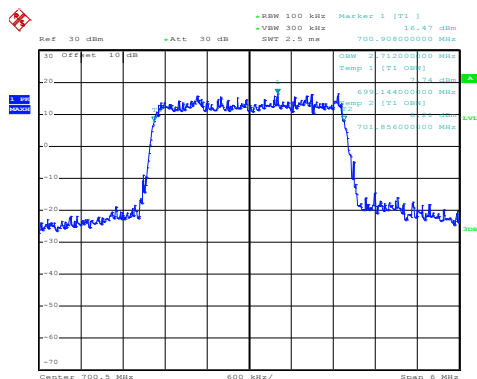


Date: 13.OCT.2017 22:35:11

Highest channel

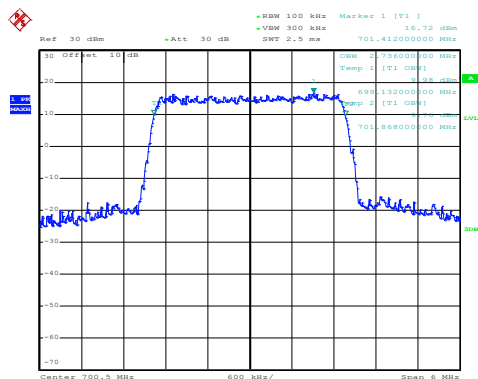
Test Item:99% Occupy bandwidth  
BW: 3MHz

Modulation:16QAM



Date: 13.OCT.2017 22:35:50

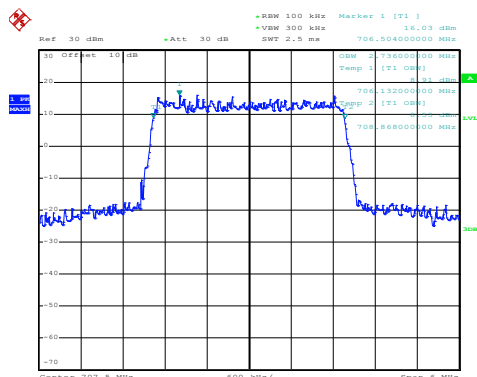
Modulation:QPSK



Date: 13.OCT.2017 22:35:45

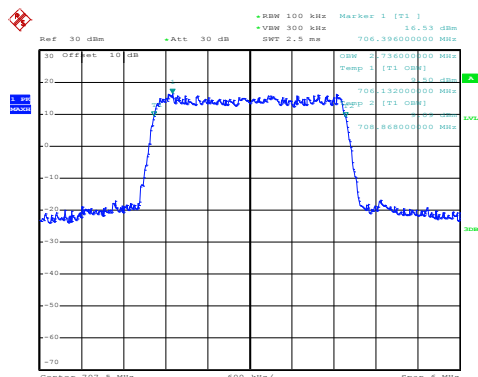
Lowest channel

Modulation:16QAM



Date: 13.OCT.2017 22:36:31

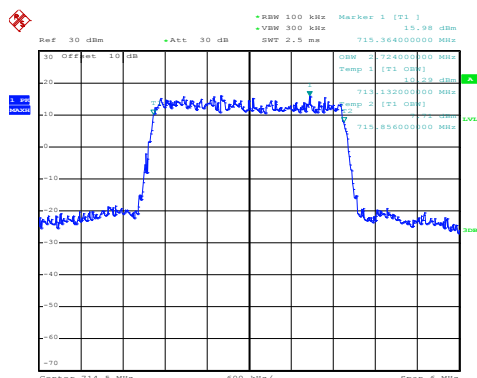
Modulation:QPSK



Date: 13.OCT.2017 22:36:28

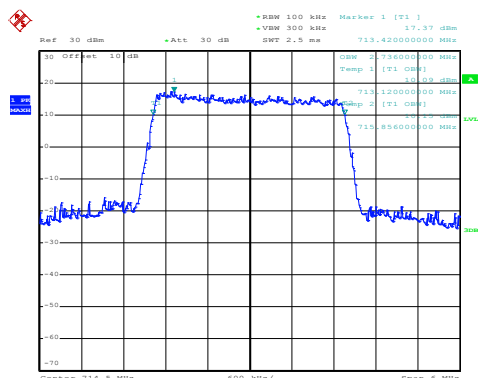
Middle channel

Modulation:16QAM



Date: 13.OCT.2017 22:36:51

Modulation:QPSK

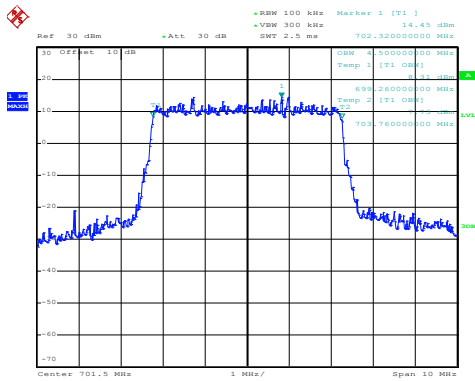


Date: 13.OCT.2017 22:36:47

Highest channel

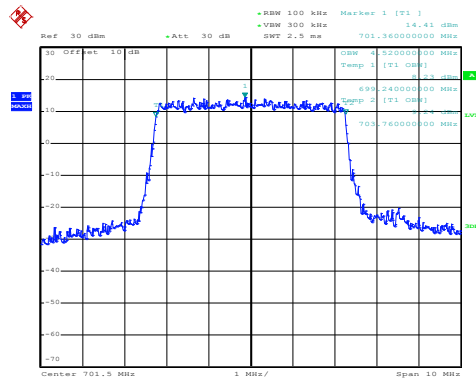
Test Item:99% Occupy bandwidth  
BW: 5MHz

Modulation:16QAM



Date: 13.OCT.2017 22:37:44

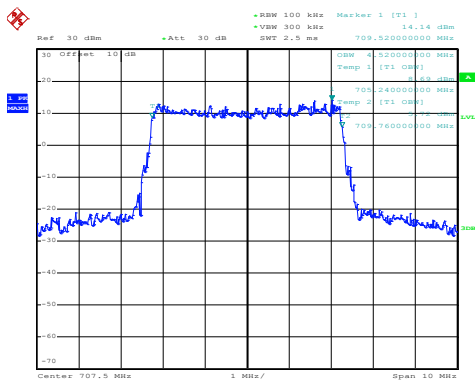
Modulation:QPSK



Date: 13.OCT.2017 22:37:38

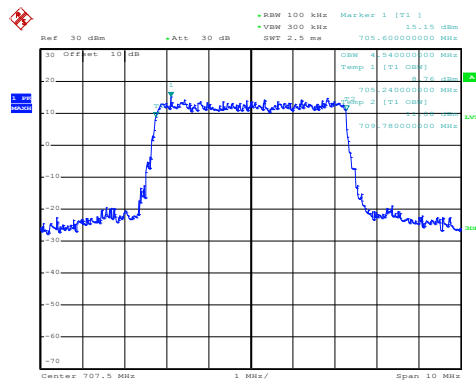
Lowest channel

Modulation:16QAM



Date: 13.OCT.2017 22:38:02

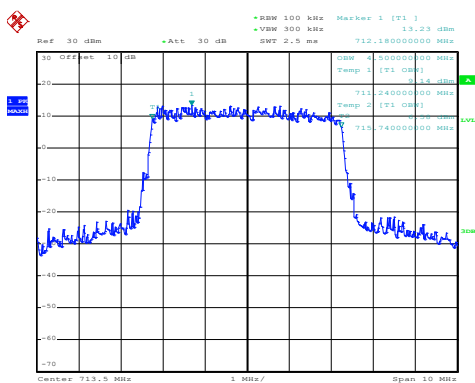
Modulation:QPSK



Date: 13.OCT.2017 22:37:58

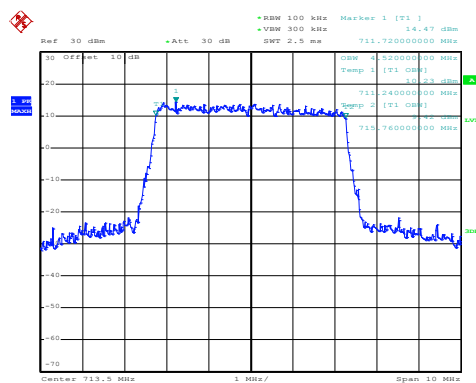
Middle channel

Modulation:16QAM



Date: 13.OCT.2017 22:38:36

Modulation:QPSK

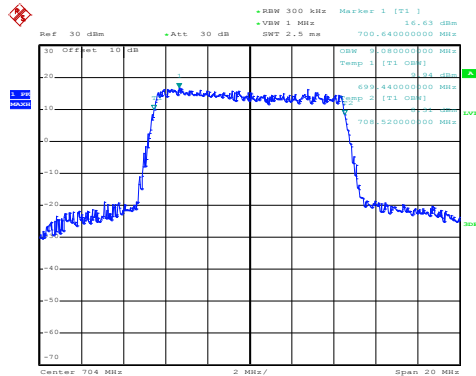


Date: 13.OCT.2017 22:38:32

Highest channel

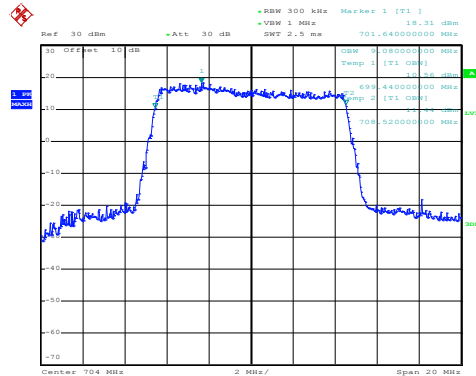
Test Item:99% Occupy bandwidth  
BW: 10MHz

Modulation:16QAM



Date: 13.OCT.2017 22:41:03

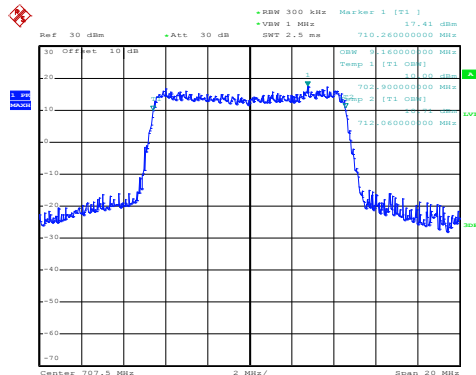
Modulation:QPSK



Date: 13.OCT.2017 22:40:57

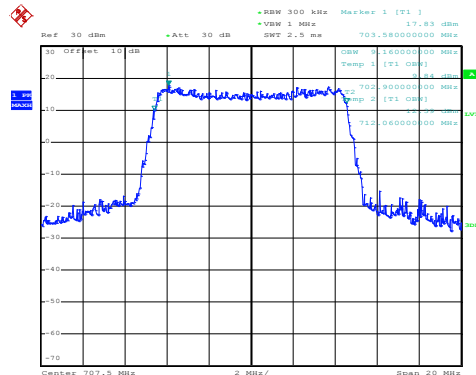
Lowest channel

Modulation:16QAM



Date: 13.OCT.2017 22:40:46

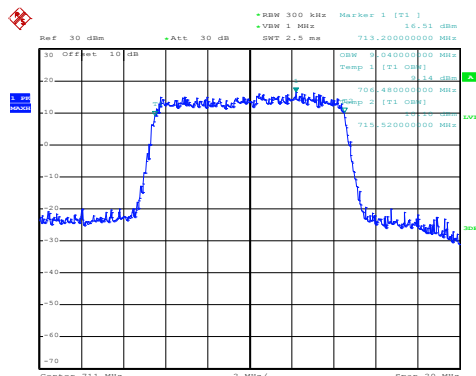
Modulation:QPSK



Date: 13.OCT.2017 22:40:41

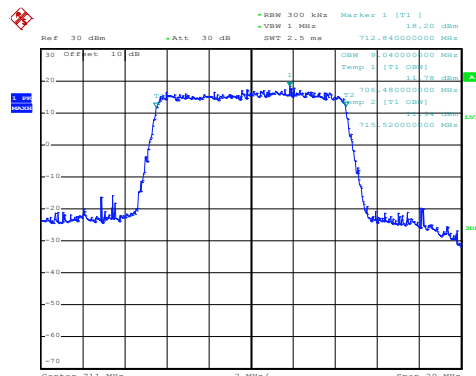
Middle channel

Modulation:16QAM



Date: 13.OCT.2017 22:40:09

Modulation:QPSK

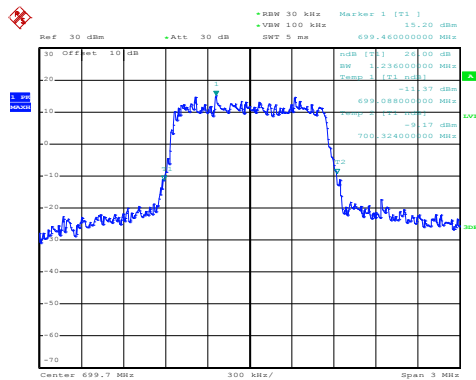


Date: 13.OCT.2017 22:40:04

Highest channel

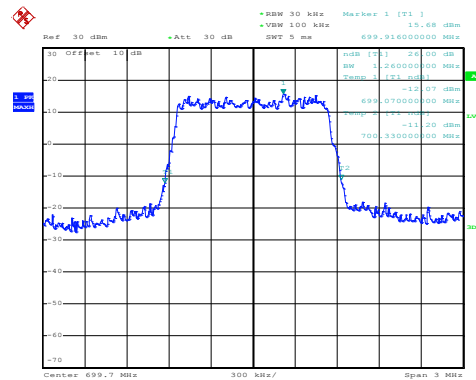
Test Item:-26dBc bandwidth  
BW: 1.4MHz

Modulation:16QAM



Date: 13.OCT.2017 22:33:55

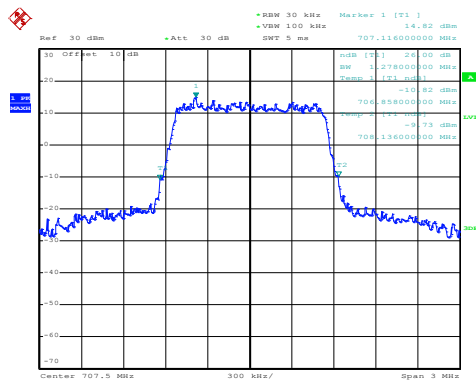
Modulation:QPSK



Date: 13.OCT.2017 22:33:52

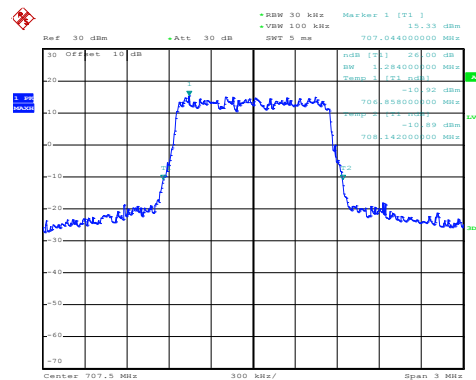
Lowest channel

Modulation:16QAM



Date: 13.OCT.2017 22:34:13

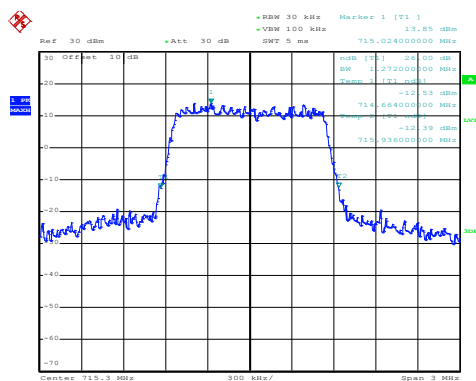
Modulation:QPSK



Date: 13.OCT.2017 22:34:44

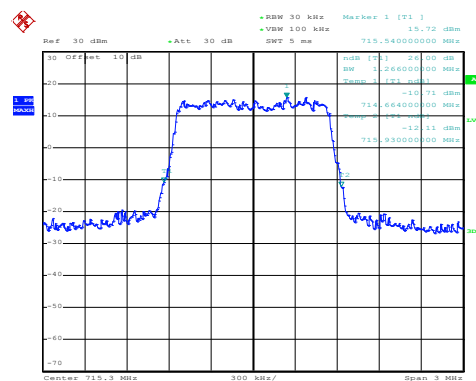
Middle channel

Modulation:16QAM



Date: 13.OCT.2017 22:35:04

Modulation:QPSK



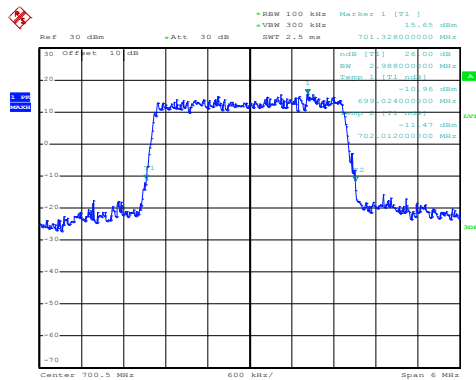
Date: 13.OCT.2017 22:34:59

Highest channel



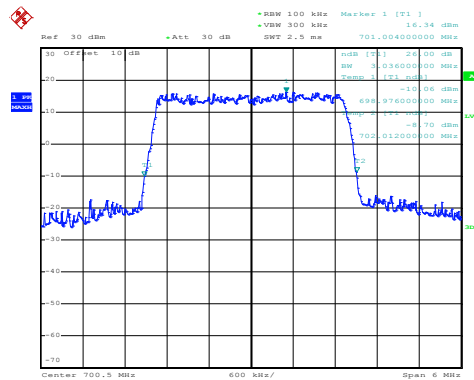
Test Item:-26dBc bandwidth  
BW: 3MHz

Modulation:16QAM



Date: 13.OCT.2017 22:36:00

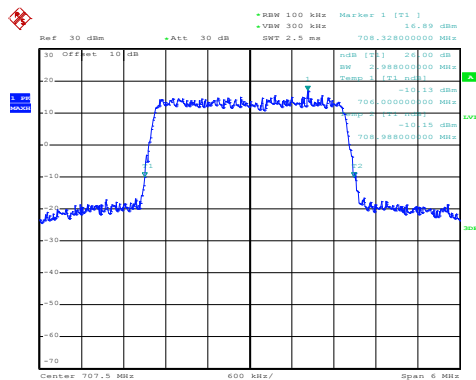
Modulation:QPSK



Date: 13.OCT.2017 22:35:56

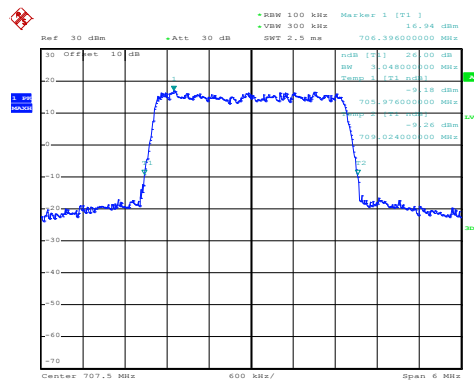
Lowest channel

Modulation:16QAM



Date: 13.OCT.2017 22:36:22

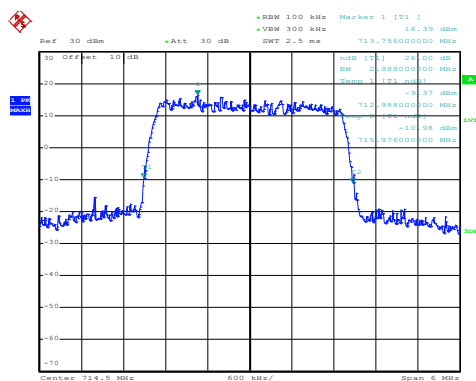
Modulation:QPSK



Date: 13.OCT.2017 22:36:18

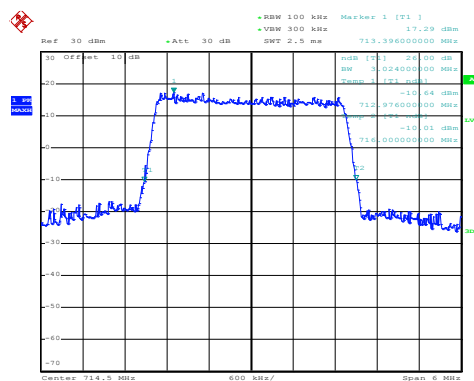
Middle channel

Modulation:16QAM



Date: 13.OCT.2017 22:37:01

Modulation:QPSK



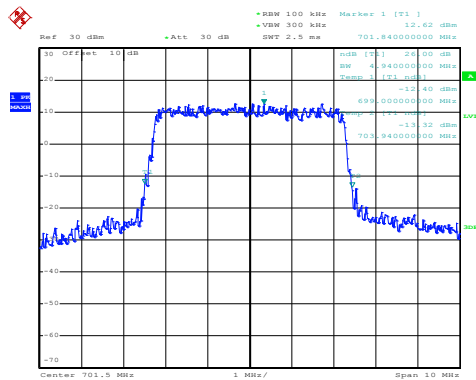
Date: 13.OCT.2017 22:36:57

Highest channel

Test Item:-26dBc bandwidth

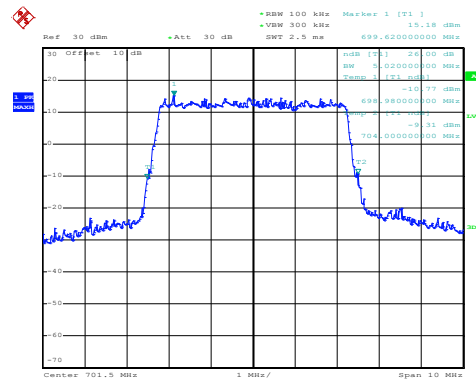
BW: 5MHz

Modulation:16QAM



Date: 13.OCT.2017 22:37:31

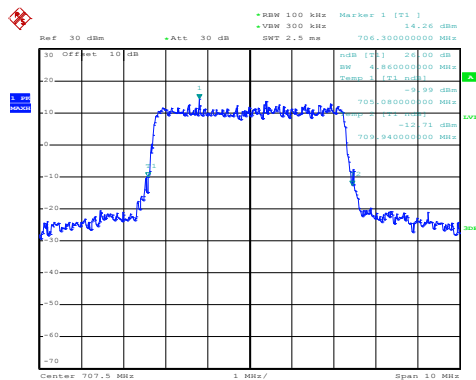
Modulation:QPSK



Date: 13.OCT.2017 22:37:27

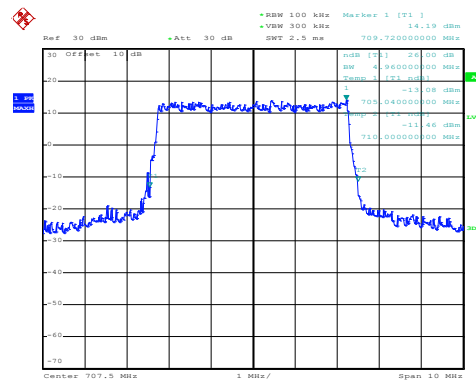
Lowest channel

Modulation:16QAM



Date: 13.OCT.2017 22:38:11

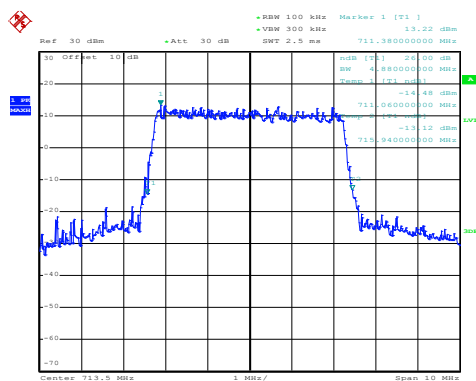
Modulation:QPSK



Date: 13.OCT.2017 22:38:07

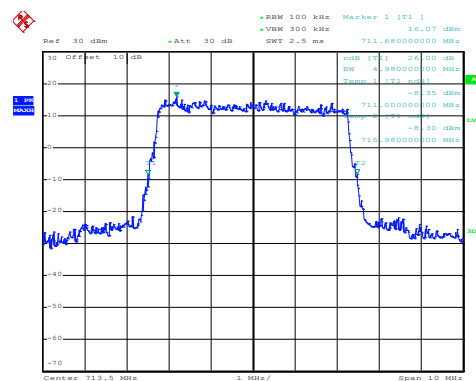
Middle channel

Modulation:16QAM



Date: 13.OCT.2017 22:38:27

Modulation:QPSK



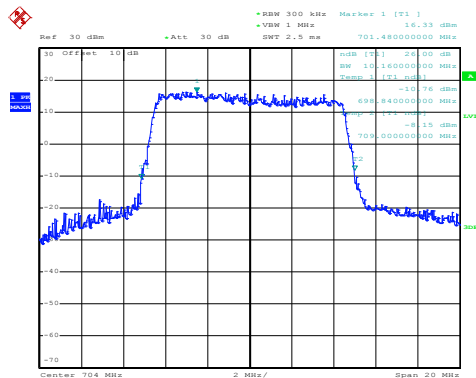
Date: 13.OCT.2017 22:38:23

Highest channel

Test Item:-26dBc bandwidth

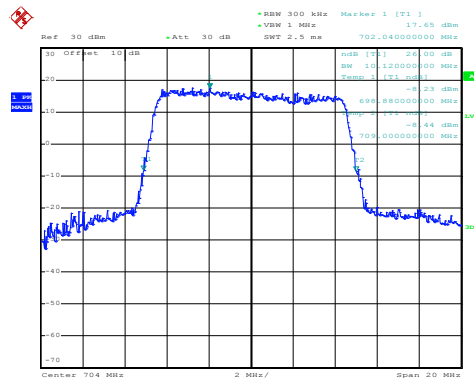
BW: 10MHz

Modulation:16QAM



Date: 13.OCT.2017 22:41:14

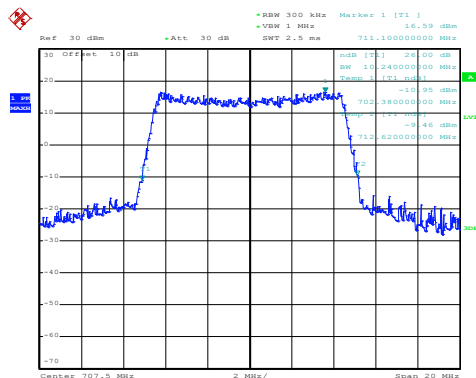
Modulation:QPSK



Date: 13.OCT.2017 22:41:10

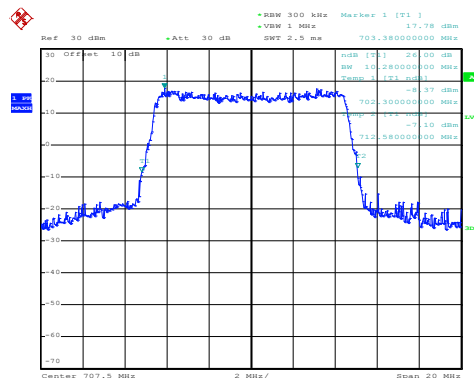
Lowest channel

Modulation:16QAM



Date: 13.OCT.2017 22:40:35

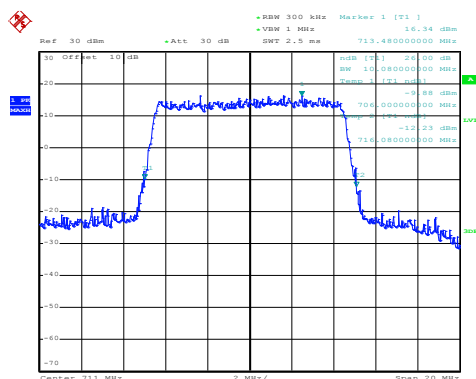
Modulation:QPSK



Date: 13.OCT.2017 22:40:30

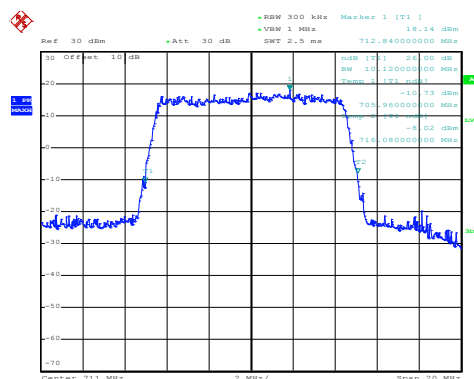
Middle channel

Modulation:16QAM



Date: 13.OCT.2017 22:40:19

Modulation:QPSK



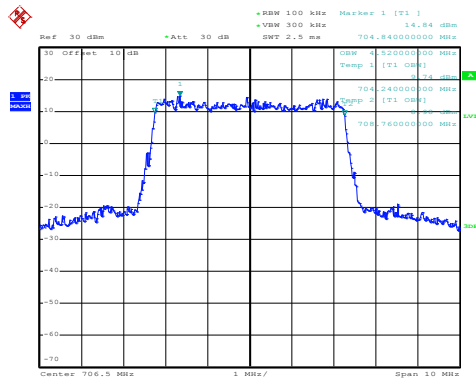
Date: 13.OCT.2017 22:40:15

Highest channel

## LTE-Band 17 part

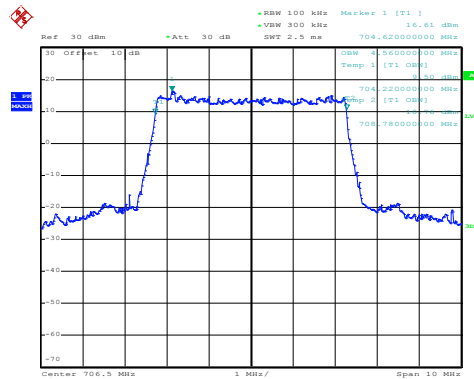
99% Occupy bandwidth  
BW: 5MHz

### 16QAM



Date: 13.OCT.2017 21:41:52

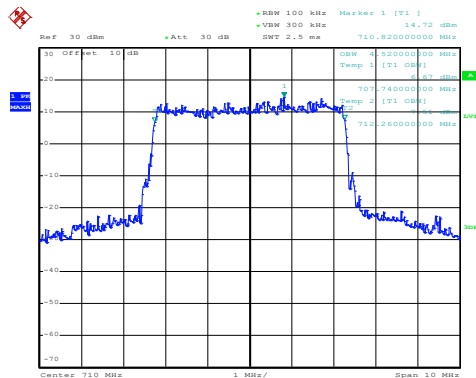
### QPSK



Date: 13.OCT.2017 21:41:38

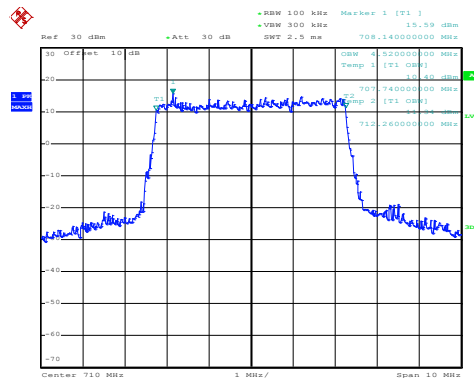
## Lowest channel

### 16QAM



Date: 13.OCT.2017 21:42:52

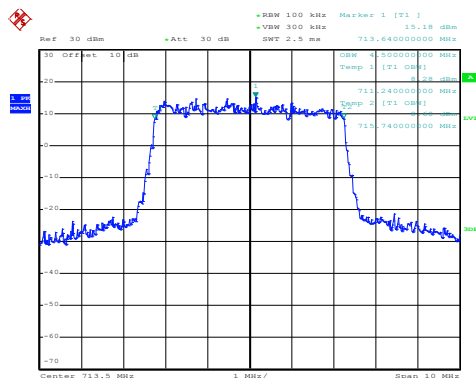
### QPSK



Date: 13.OCT.2017 21:42:49

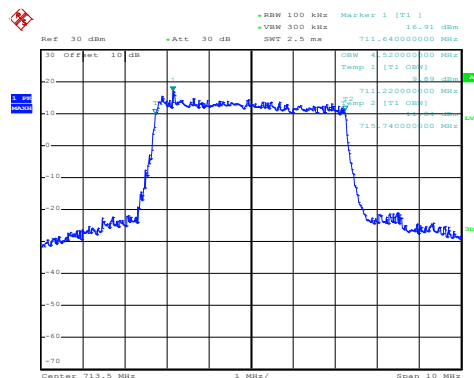
## Middle channel

### 16QAM



Date: 13.OCT.2017 21:43:11

### QPSK

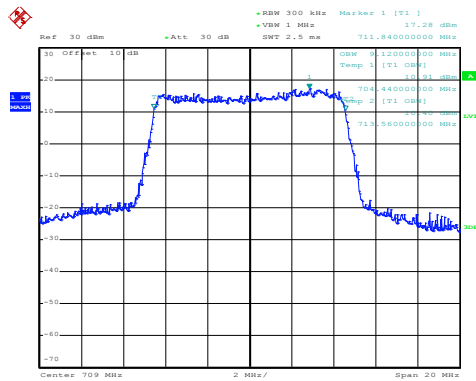


Date: 13.OCT.2017 21:43:06

## Highest channel

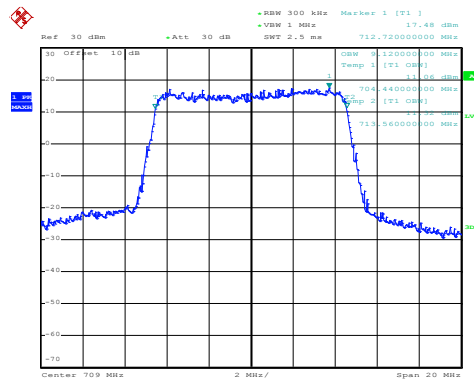
99% Occupy bandwidth  
BW: 10MHz

## 16QAM



Date: 13.OCT.2017 21:44:07

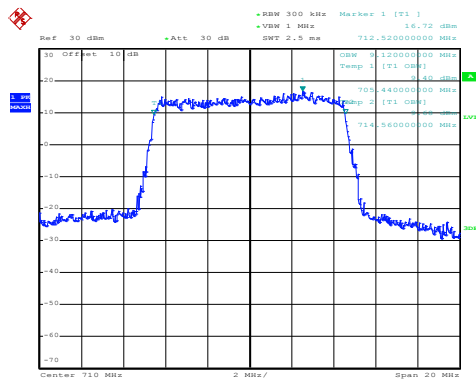
## QPSK



Date: 13.OCT.2017 21:44:00

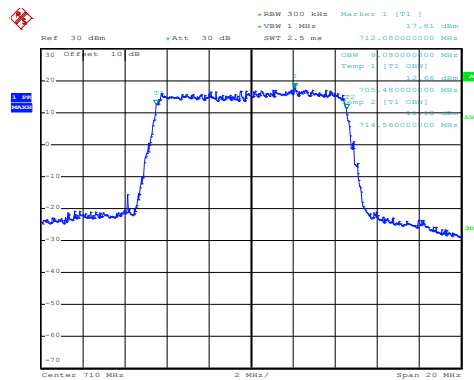
Lowest channel

## 16QAM



Date: 13.OCT.2017 21:44:24

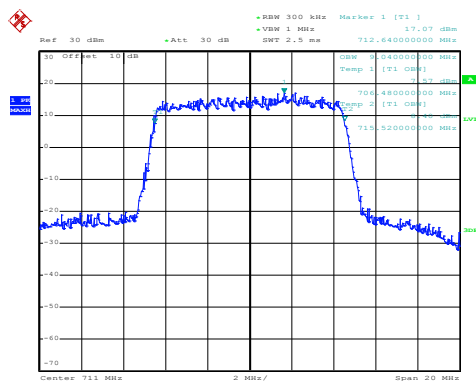
## QPSK



Date: 13.OCT.2017 21:44:21

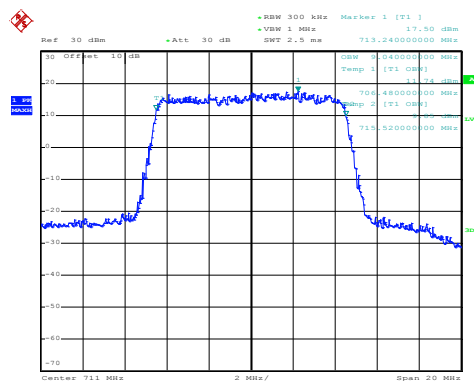
Middle channel

## 16QAM



Date: 13.OCT.2017 21:45:04

## QPSK

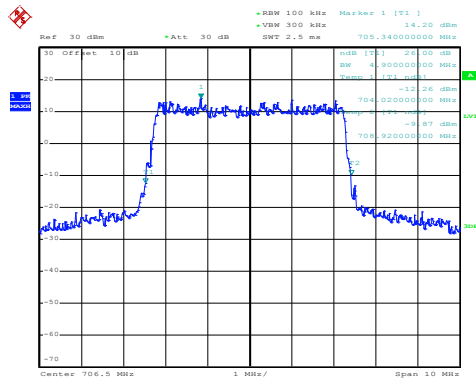


Date: 13.OCT.2017 21:45:00

Highest channel

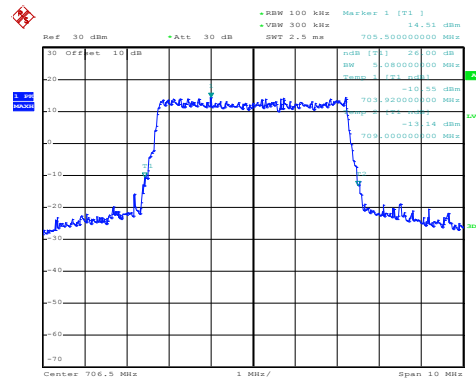
-26dBc bandwidth  
BW: 5MHz

## 16QAM



Date: 13.OCT.2017 21:42:02

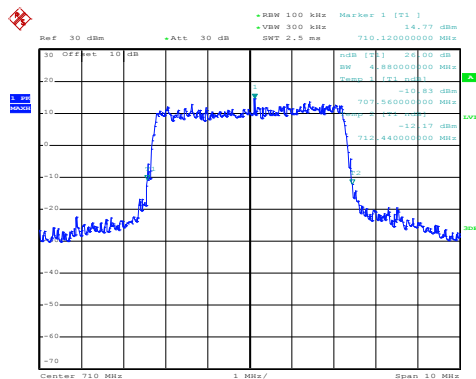
## QPSK



Date: 13.OCT.2017 21:41:58

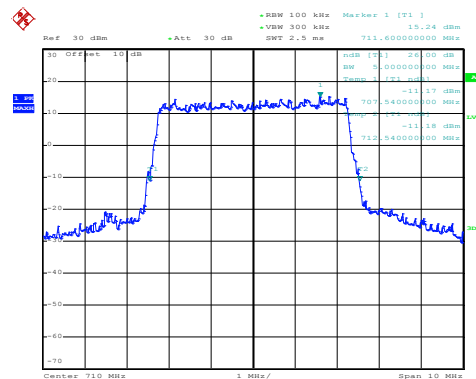
## Lowest channel

## 16QAM



Date: 13.OCT.2017 21:42:42

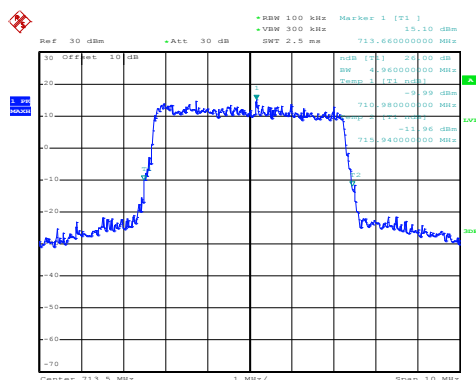
## QPSK



Date: 13.OCT.2017 21:42:38

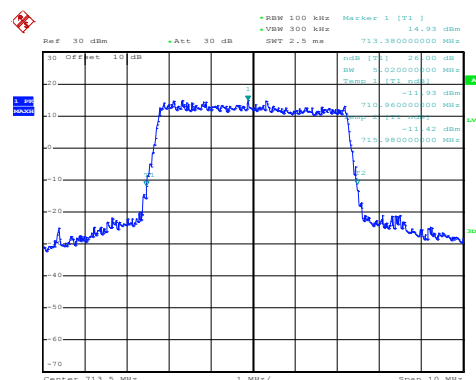
## Middle channel

## 16QAM



Date: 13.OCT.2017 21:43:22

## QPSK

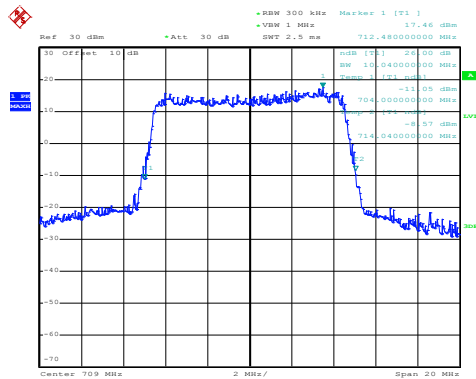


Date: 13.OCT.2017 21:43:17

## Highest channel

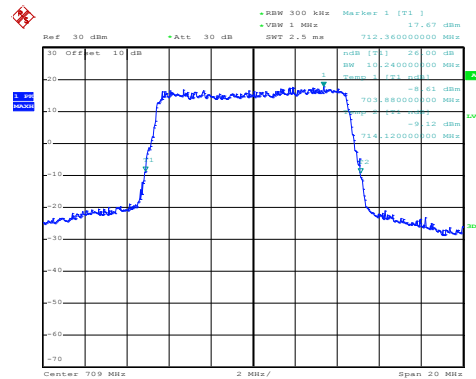
-26dBc bandwidth  
BW: 10MHz

### 16QAM



Date: 13.OCT.2017 21:43:55

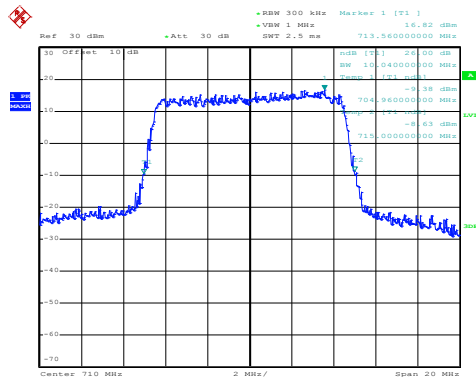
### QPSK



Date: 13.OCT.2017 21:43:51

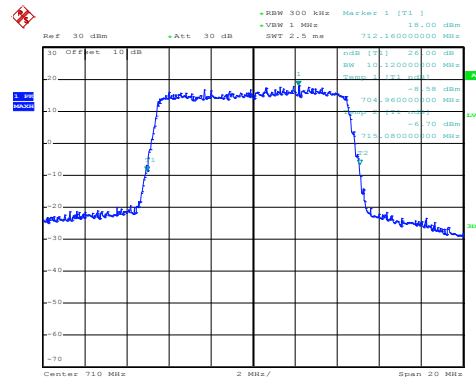
Lowest channel

### 16QAM



Date: 13.OCT.2017 21:44:37

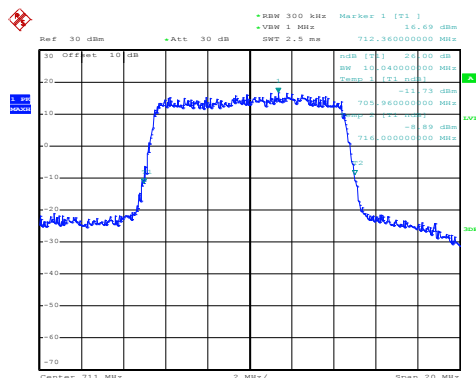
### QPSK



Date: 13.OCT.2017 21:44:33

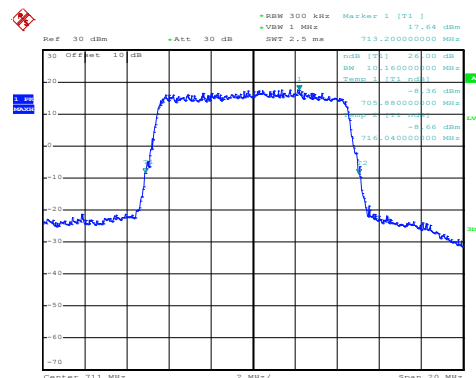
Middle channel

### 16QAM



Date: 13.OCT.2017 21:44:54

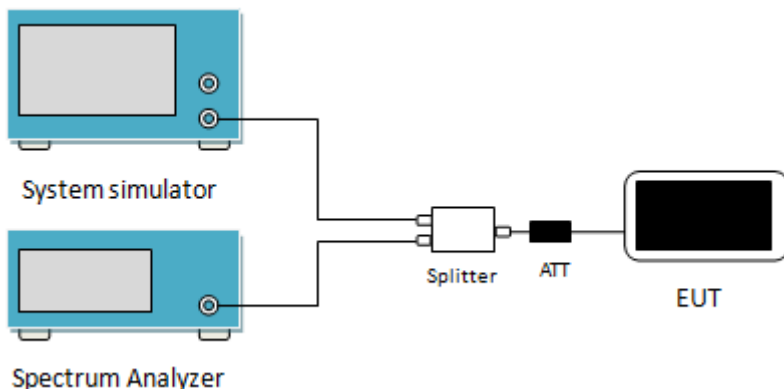
### QPSK



Date: 13.OCT.2017 21:44:49

Highest channel

## 6.4 Out of band emission at antenna terminals

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Requirement: | FCC Part 24.238 (a), part 27.53(g), part 27.53(h), Part 27.53(m), Part 22.917(a)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Test Method:      | ANSI/TIA-603-D 2010                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Limit:            | <p>Band 2, Band 4, Band 17: The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least <math>43 + 10 \log_{10}(P)</math> dB (-13 dBm).</p> <p>Band7: For mobile digital stations, the attenuation factor shall be not less than <math>40 + 10 \log (P)</math> dB on all frequencies between the channel edge and 5 megahertz from the channel edge, <math>43 + 10 \log (P)</math> dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and <math>55 + 10 \log (P)</math> dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that <math>43 + 10 \log (P)</math> dB on all frequencies between 2490.5 MHz and 2496 MHz and <math>55 + 10 \log (P)</math> dB at or below 2490.5 MHz.</p> |
| Test Setup:       |  <p>The diagram illustrates the test setup. On the left, there are two blue rectangular units: the top one is labeled 'System simulator' and the bottom one is labeled 'Spectrum Analyzer'. Both have a single output port. These two ports are connected to a single input port of a white rectangular unit labeled 'Splitter'. The 'Splitter' has two output ports. One output port is connected to a black rectangular unit labeled 'ATT' (Attenuator). The other output port of the 'Splitter' is connected to the input port of a black rectangular unit labeled 'EUT' (Equipment Under Test).</p>                                                                                                                                                                                                                                                                                                  |
| Test Procedure:   | <ol style="list-style-type: none"> <li>1 The RF output of the transceiver was connected to a spectrum analyzer through appropriate attenuation.</li> <li>2 The resolution bandwidth of the spectrum analyzer was set at 100 kHz when below 1GHz, 1MHz when above 1 GHz; sufficient scans were taken to show the out of band Emissions if any up to 10th harmonic.</li> <li>3 For the out of band: Set the RBW=100 kHz, VBW=300 kHz when below 1 GHz, RBW =1 MHz, VBW=3 MHz when above 1 GHz, Start=30MHz, Stop= 10th harmonic.</li> <li>4 Band Edge Requirements: In the 1 MHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 1 percent of the emission bandwidth of the fundamental emission of the transmitter may be employed to measure the out of band Emissions.</li> </ol>                                                                                                                                                        |
| Test Instruments: | Refer to section 5.8 for details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Test mode:        | Refer to section 5.3 for details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Test results:     | Passed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

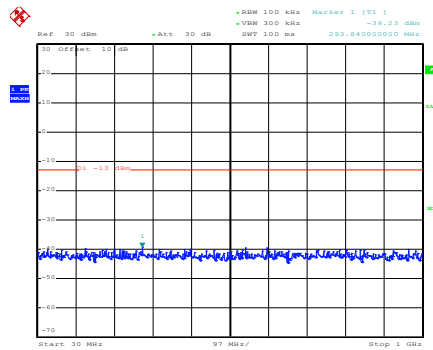
Test plots as follows:



**Conducted spurious emission**  
**LTE band 2, 1.4MHz**

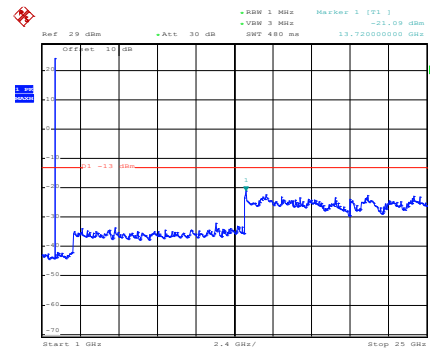
16 QAM &amp; RB Size 1

Lowest channel



Date: 16.OCT.2017 23:11:16

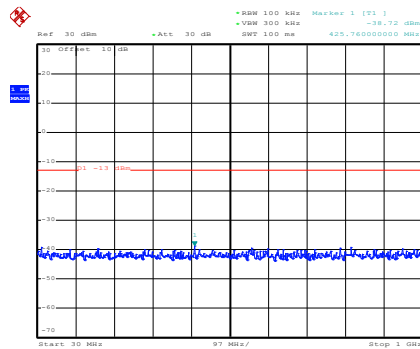
30MHz~1GHz



Date: 23.OCT.2017 21:06:57

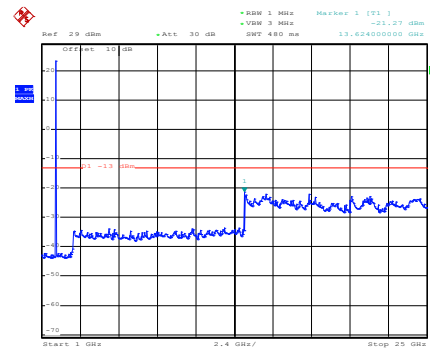
1GHz~25GHz

Middle channel



Date: 16.OCT.2017 23:12:01

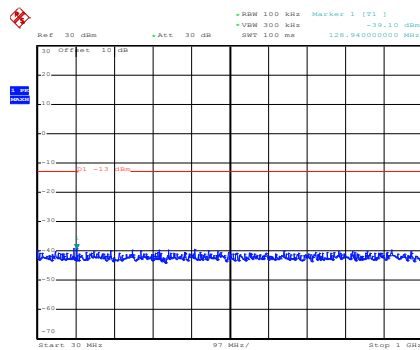
30MHz~1GHz



Date: 23.OCT.2017 21:08:12

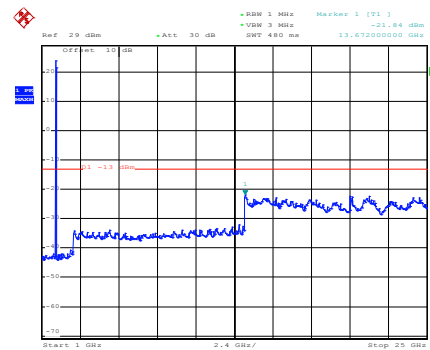
1GHz~25GHz

High channel



Date: 16.OCT.2017 23:12:36

30MHz~1GHz



Date: 23.OCT.2017 21:09:06

1GHz~25GHz