

# FCC REPORT

## (LTE)

**Applicant:** General Procurement, INC.

**Address of Applicant:** 800 E Dyer Road Santa Ana, Ca 92705 Santa Ana, CA  
92705 United States

**Equipment Under Test (EUT)**

Product Name: Smart Phone

Model No.: W25042L, VM5021

Trade mark: Hyundai, Vulcan

**FCC ID:** S94W25042L

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

**Date of sample receipt:** 05 May, 2017

**Date of Test:** 05 May, to 14 Jun., 2017

**Date of report issued:** 14 Jun., 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          | 14 Jun., 2017 | Original    |
|             |               |             |
|             |               |             |
|             |               |             |
|             |               |             |

Tested by:

YT Yang

Test Engineer

Date:

14 Jun., 2017

Reviewed by:

Ryan Lee

Project Engineer

Date:

14 Jun., 2017

## 3. Contents

|                                                            | Page       |
|------------------------------------------------------------|------------|
| <b>1. COVER PAGE .....</b>                                 | <b>1</b>   |
| <b>2. VERSION.....</b>                                     | <b>2</b>   |
| <b>3. CONTENTS.....</b>                                    | <b>3</b>   |
| <b>4. TEST SUMMARY .....</b>                               | <b>4</b>   |
| <b>5. GENERAL INFORMATION .....</b>                        | <b>5</b>   |
| 5.1 CLIENT INFORMATION.....                                | 5          |
| 5.2 GENERAL DESCRIPTION OF E.U.T .....                     | 5          |
| 5.3 TEST MODES.....                                        | 12         |
| 5.4 RELATED SUBMITTAL(S) / GRANT (S).....                  | 12         |
| 5.5 TEST METHODOLOGY.....                                  | 12         |
| 5.6 LABORATORY FACILITY.....                               | 12         |
| 5.7 LABORATORY LOCATION .....                              | 13         |
| 5.8 TEST INSTRUMENTS LIST.....                             | 13         |
| <b>6. SYSTEM TEST CONFIGURATION .....</b>                  | <b>14</b>  |
| 6.1 EUT CONFIGURATION .....                                | 14         |
| 6.2 EUT EXERCISE.....                                      | 14         |
| 6.3 CONFIGURATION OF TESTED SYSTEM .....                   | 14         |
| 6.4 DESCRIPTION OF TEST MODES.....                         | 14         |
| 6.5 CONDUCTED OUTPUT POWER .....                           | 15         |
| 6.6 PEAK-TO-AVERAGE RATIO .....                            | 24         |
| 6.7 OCCUPY BANDWIDTH .....                                 | 28         |
| 6.8 MODULATION CHARACTERISTIC.....                         | 77         |
| 6.9 OUT OF BAND EMISSION AT ANTENNA TERMINALS .....        | 77         |
| 6.10 ERP, EIRP MEASUREMENT .....                           | 386        |
| 6.11 FIELD STRENGTH OF SPURIOUS RADIATION MEASUREMENT..... | 403        |
| 6.12 FREQUENCY STABILITY V.S. TEMPERATURE MEASUREMENT..... | 427        |
| 6.13 FREQUENCY STABILITY V.S. VOLTAGE MEASUREMENT .....    | 441        |
| <b>7 TEST SETUP PHOTO.....</b>                             | <b>451</b> |
| <b>8 EUT CONSTRUCTIONAL DETAILS .....</b>                  | <b>452</b> |

## 4. Test Summary

| Test Item                              | 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 24.232 (c)<br>Part 27.50 (c)(10)<br>Part 27.50 (d)(4)<br>Part 27.50 (h)(2)<br>Part 22.913 (a)(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 24.238(b)<br>Part 27.53(g)<br>Part 27.53(h)<br>Part 27.53(m)<br>Part 22.917(b)                   | Pass                                   |
| Spurious Emissions at Antenna Terminal | Part 2.1051<br>Part 24.238 (a)<br>Part 27.53 (g)<br>Part 27.53 (h)<br>Part 27.53(m)<br>Part 22.917(a)                | Pass                                   |
| Field Strength of Spurious Radiation   | Part 2.1053<br>Part 24.238 (a)<br>Part 27.53 (g)<br>Part 27.53 (h)<br>Part 27.53(m)<br>Part 22.917(a)                | Pass                                   |
| Out of band emission, Band Edge        | Part 24.238 (a)<br>Part 27.53 (g)<br>Part 27.53 (h)<br>Part 27.53(m)<br>Part 22.917(a)                               | 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:               | General Procurement, INC.                                           |
| Address of Applicant:    | 800 E Dyer Road Santa Ana, Ca 92705Santa Ana, CA 92705United States |
| Manufacturer             | General Procurement, INC.                                           |
| Address of Manufacturer: | 800 E Dyer Road Santa Ana, Ca 92705Santa Ana, CA 92705United States |

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

|                            |                                                                                                                                                                                                                                                                               |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Name:              | Smart Phone                                                                                                                                                                                                                                                                   |
| Model No.:                 | W25042L, VM5021                                                                                                                                                                                                                                                               |
| 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 17: TX: 704MHz -716MHz, RX: 734MHz-746MHz |
| Modulation type:           | QPSK, 16QAM                                                                                                                                                                                                                                                                   |
| Antenna type:              | Internal Antenna                                                                                                                                                                                                                                                              |
| Antenna gain:              | LTE Band 2: -1.3dBi<br>LTE Band 4: -1.3dBi<br>LTE Band 5: -1.3dBi<br>LTE Band 7: -1.3dBi<br>LTE Band 17: -1.3dBi                                                                                                                                                              |
| Power supply:              | Rechargeable Li-ion Battery DC3.8V-3050mAh                                                                                                                                                                                                                                    |
| AC adapter:                | Model: HCSD-1685015<br>Input: AC100-240V 50/60Hz 0.4A<br>Output: DC 5.0V, 1.5A                                                                                                                                                                                                |
| Remark:                    | Model No.: W25042L, VM5021 were identical inside, the electrical circuit design, layout, components used and internal wiring, with only difference being model name and Brand. Hyundai for W25042L, Vulcan for VM5021.                                                        |

**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 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 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 modes

|                                |                                                                                                                                                                                       |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Data mode (LTE band 2(QPSK))   | Keep the EUT in data communicating mode on LTE band 2(QPSK).<br>(LTE band2(1.4MHz), LTE band2(3MHz), LTE band2(5MHz),<br>LTE band2(10MHz), LTE band2(15MHz), LTE band2(20MHz))        |
| Data mode (LTE band 2(16QAM))  | Keep the EUT in data communicating mode on LTE band 2(16QAM).<br>(LTE band2(1.4MHz), LTE band2(3MHz), LTE band2(5MHz),<br>LTE band2(10MHz), LTE band2(15MHz), LTE band2(20MHz))       |
| Data mode (LTE band 4(QPSK))   | Keep the EUT in data communicating mode on LTE band 4(QPSK).<br>(LTE band 4(1.4MHz), LTE band 4(3MHz), LTE band 4(5MHz),<br>LTE band 4(10MHz), LTE band 4(15MHz), LTE band 4(20MHz))  |
| Data mode (LTE band 4(16QAM))  | Keep the EUT in data communicating mode on LTE band 4(16QAM).<br>(LTE band 4(1.4MHz), LTE band 4(3MHz), LTE band 4(5MHz),<br>LTE band 4(10MHz), LTE band 4(15MHz), LTE band 4(20MHz)) |
| Data mode (LTE band 5(QPSK))   | Keep the EUT in data communicating mode on LTE band5(QPSK).<br>(LTE band5(1.4MHz), LTE band5(3MHz), LTE band5(5MHz),<br>LTE band5(10MHz))                                             |
| Data mode (LTE band 5(16QAM))  | Keep the EUT in data communicating mode on LTE band5(16QAM).<br>(LTE band5(1.4MHz), LTE band5(3MHz), LTE band5(5MHz),<br>LTE band5(10MHz))                                            |
| Data mode (LTE band 7(QPSK))   | Keep the EUT in data communicating mode on LTE band 7(QPSK).<br>(LTE band7(5MHz), LTE band 7(10MHz), LTE band 7(15MHz), LTE band<br>7(20MHz))                                         |
| Data mode (LTE band 7(16QAM))  | Keep the EUT in data communicating mode on LTE band<br>7(16QAM).(LTE band7(5MHz), LTE band7(10MHz), LTE band 7(15MHz),<br>LTE band 7(20MHz))                                          |
| Data mode (LTE band 17(QPSK))  | Keep the EUT in data communicating mode on LTE band17(QPSK).<br>(LTE band17(5MHz), LTE band17(10MHz))                                                                                 |
| Data mode (LTE band 17(16QAM)) | Keep the EUT in data communicating mode on LTE band<br>17(16QAM).(LTE band17(5MHz), LTE band17(10MHz))                                                                                |
| Remark :                       | Just the worst case data were shown in the report.                                                                                                                                    |

## 5.4 Related Submittal(s) / Grant (s)

This submittal(s) (test report) is filing to comply with Section Part 22 Subpart H, Part 24 subpart E, Part 27 subpart L, Part 27 Subpart M and Part 27 subpart H of the FCC CFR 47 Rules.

## 5.5 Test Methodology

Both conducted and radiated testing were performed according to the procedures document on TIA/EIA 603 and FCC CFR 47clause 2.1046, 2.1047, 2.1049, 2.1051, 2.1053, 2.1055 and 2.1057

## 5.6 Laboratory Facility

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

### ●FCC - Registration No.: 817957

Shenzhen ZhongjianNanfang Testing Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in out files. Registration 817957, February 27, 2012.

### ●IC - Registration No.: 10106A-1

The 3m Semi-anechoic chamber of Shenzhen ZhongjianNanfang 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 ZhongjianNanfang 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.

## 5.7 Laboratory Location

Shenzhen ZhongjianNanfang Testing Co., Ltd.  
Address: No.B-C, 1/F., Building 2, Laodong No.2 Industrial Park, Xixiang Road,  
Bao'an District, Shenzhen, Guangdong, China  
Tel: +86-755-23118282  
Fax: +86-755-23116366  
Email: info@ccis-cb.com

## 5.8 Test Instruments list

| Test Equipment                       | Manufacturer                             | Model No.                   | Inventory No. | Cal. Date (mm-dd-yy) | Cal. Due date (mm-dd-yy) |
|--------------------------------------|------------------------------------------|-----------------------------|---------------|----------------------|--------------------------|
| 3m Semi- Anechoic Chamber            | SAEMC                                    | 9(L)*6(W)* 6(H)             | CCIS0001      | 08-23-2014           | 08-22-2017               |
| BiConiLog Antenna                    | SCHWARZBECK<br>MESS-ELEKTRONIK           | VULB9163                    | CCIS0005      | 02-25-2017           | 02-24-2018               |
| Double -ridged waveguide horn        | SCHWARZBECK<br>MESS-ELEKTRONIK           | BBHA9120D                   | CCIS0006      | 02-25-2017           | 02-24-2018               |
| EMI Test Software                    | AUDIX                                    | E3                          | N/A           | N/A                  | N/A                      |
| Amplifier (10kHz-1.3GHz)             | HP                                       | 8447D                       | CCIS0003      | 02-25-2017           | 02-24-2018               |
| Amplifier (1GHz-18GHz)               | Compliance Direction Systems Inc.        | PAP-1G18                    | CCIS0011      | 02-25-2017           | 02-24-2018               |
| Pre-amplifier (18-26GHz)             | Rohde & Schwarz                          | AFS33-18002<br>650-30-8P-44 | GTS218        | 02-25-2017           | 02-24-2018               |
| Horn Antenna                         | ETS-LINDGREN                             | 3160                        | GTS217        | 02-25-2017           | 02-24-2018               |
| Printer                              | HP                                       | HP LaserJet P1007           | N/A           | N/A                  | N/A                      |
| Positioning Controller               | UC                                       | UC3000                      | CCIS0015      | N/A                  | N/A                      |
| Spectrum analyzer 9k-30GHz           | Rohde & Schwarz                          | FSP 30                      | CCIS0023      | 02-25-2017           | 02-24-2018               |
| EMI Test Receiver                    | Rohde & Schwarz                          | ESPI                        | CCIS0022      | 02-25-2017           | 02-24-2018               |
| EMI Test Receiver                    | Rohde & Schwarz                          | ESRP7                       | CCIS0167      | 02-25-2017           | 02-24-2018               |
| Loop antenna                         | Laplace instrument                       | RF300                       | EMC0701       | 02-25-2017           | 02-24-2018               |
| Universal radio communication tester | Rhode & Schwarz                          | CMU200                      | CCIS0069      | 02-25-2017           | 02-24-2018               |
| Signal Analyzer                      | Rohde & Schwarz                          | FSIQ3                       | CCIS0088      | 02-25-2017           | 02-24-2018               |
| DC Power Supply                      | Shenzhen XinNuoEr Technologies Co., Ltd. | WYK-10020K                  | CCIS0201      | 10-31-2016           | 10-30-2017               |
| Temperature Humidity Chamber         | Fo Shan HengPu Electronics Co., Ltd.     | HPGDS-500                   | CCIS0240      | 11-18-2016           | 11-27-2017               |

## 6. System test configuration

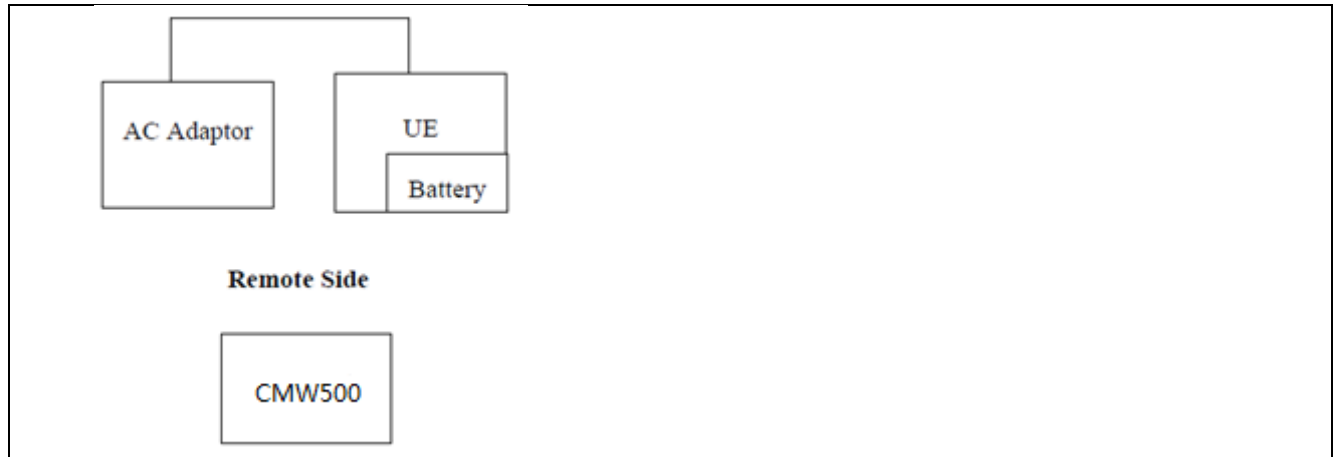
### 6.1 EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the commission's requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

### 6.2 EUT Exercise

The EUT (Transmitter) was operated in the engineering mode to fix the Tx frequency which was for the purpose of the measurements.

### 6.3 Configuration of Tested System



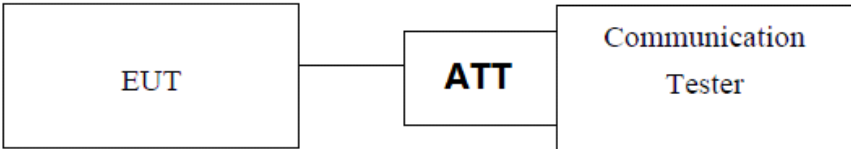
### 6.4 Description of Test Modes

The EUT has been tested under operating condition.

EUT staying in 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 three modes (LTE Band 2, LTE Band 4, LTE Band 5, LTE Band 7, LTE Band 17) with power adaptor, earphone and Data cable. The worst-case H mode for LTE Band 2, LTE Band 4, LTE Band 5, LTE Band 7, LTE Band 17.

## 6.5 Conducted Output Power

|                   |                                                                                                                                                                    |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Requirement: | FCCPart 22.913 (a),Part 24.232 (c), part 27.50(c), part 27.50(d), Part 27.50 (h)                                                                                   |
| Test Method:      | FCC part2.1046                                                                                                                                                     |
| Limit:            | LTE Band2: 2W<br>LTE Band 4: 1W<br>LTE Band 5: 7W<br>LTE Band 7: 2W<br>LTE Band 17: 3W                                                                             |
| Test setup:       |  <p><i>Note: Measurement setup for testing on Antenna connector</i></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 2 part**

| 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         | 21.78               | 22.03     | 21.82     |
|          |                 |            | 1       | 2         | 21.79               | 22.12     | 21.89     |
|          |                 |            | 1       | 5         | 21.80               | 22.06     | 21.86     |
|          |                 |            | 3       | 0         | 21.95               | 22.19     | 21.98     |
|          |                 |            | 3       | 1         | 21.89               | 22.17     | 21.93     |
|          |                 |            | 3       | 2         | 21.83               | 22.12     | 21.92     |
|          |                 |            | 6       | 0         | 20.98               | 21.23     | 20.95     |
|          |                 | 16QAM      | 1       | 0         | 21.26               | 21.52     | 21.02     |
|          |                 |            | 1       | 2         | 20.92               | 21.26     | 20.78     |
|          |                 |            | 1       | 5         | 20.89               | 21.23     | 20.86     |
|          |                 |            | 3       | 0         | 20.93               | 21.32     | 20.98     |
|          |                 |            | 3       | 1         | 21.02               | 21.30     | 20.85     |
|          |                 |            | 3       | 2         | 21.10               | 21.20     | 20.93     |
|          |                 |            | 6       | 0         | 20.36               | 20.30     | 20.31     |
| 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         | 21.78               | 22.12     | 21.82     |
|          |                 |            | 1       | 7         | 21.89               | 22.13     | 21.83     |
|          |                 |            | 1       | 14        | 21.74               | 22.01     | 21.78     |
|          |                 |            | 8       | 0         | 20.98               | 21.24     | 20.96     |
|          |                 |            | 8       | 4         | 20.90               | 21.25     | 20.94     |
|          |                 |            | 8       | 7         | 20.90               | 21.23     | 20.98     |
|          |                 |            | 15      | 0         | 20.91               | 21.20     | 20.95     |
|          |                 | 16QAM      | 1       | 0         | 20.95               | 21.53     | 20.91     |
|          |                 |            | 1       | 7         | 20.98               | 21.58     | 21.06     |
|          |                 |            | 1       | 14        | 20.94               | 21.16     | 21.23     |
|          |                 |            | 8       | 0         | 20.21               | 20.36     | 20.35     |
|          |                 |            | 8       | 4         | 20.32               | 20.35     | 20.56     |
|          |                 |            | 8       | 7         | 20.31               | 20.41     | 20.43     |
|          |                 |            | 15      | 0         | 20.30               | 20.35     | 20.31     |
| 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         | 21.92               | 22.12     | 21.26     |
|          |                 |            | 1       | 12        | 21.89               | 22.17     | 21.89     |
|          |                 |            | 1       | 24        | 21.84               | 22.06     | 21.84     |
|          |                 |            | 12      | 0         | 21.05               | 21.30     | 21.26     |
|          |                 |            | 12      | 6         | 21.04               | 21.26     | 21.13     |
|          |                 |            | 12      | 11        | 21.16               | 21.27     | 21.16     |
|          |                 |            | 25      | 0         | 20.95               | 21.25     | 20.95     |
|          |                 | 16QAM      | 1       | 0         | 20.99               | 21.36     | 21.35     |
|          |                 |            | 1       | 12        | 20.85               | 21.35     | 20.99     |
|          |                 |            | 1       | 24        | 21.03               | 21.28     | 20.16     |
|          |                 |            | 12      | 0         | 20.45               | 20.56     | 20.35     |
|          |                 |            | 12      | 6         | 20.34               | 20.47     | 20.43     |
|          |                 |            | 12      | 11        | 20.39               | 20.43     | 20.41     |
|          |                 |            | 25      | 0         | 20.30               | 20.39     | 20.30     |

| 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         | 21.98               | 22.05     | 21.95     |
|          |                 |            | 1       | 24        | 21.89               | 22.00     | 21.82     |
|          |                 |            | 1       | 49        | 21.90               | 22.06     | 21.86     |
|          |                 |            | 25      | 0         | 20.89               | 21.12     | 21.16     |
|          |                 |            | 25      | 12        | 20.78               | 21.16     | 21.13     |
|          |                 |            | 25      | 24        | 20.86               | 21.14     | 21.14     |
|          |                 |            | 50      | 0         | 20.98               | 21.18     | 20.99     |
|          |                 | 16QAM      | 1       | 0         | 21.26               | 21.16     | 21.16     |
|          |                 |            | 1       | 24        | 21.23               | 21.25     | 21.35     |
|          |                 |            | 1       | 49        | 21.27               | 21.13     | 21.16     |
|          |                 |            | 25      | 0         | 20.46               | 20.46     | 20.35     |
|          |                 |            | 25      | 12        | 20.34               | 20.45     | 20.45     |
|          |                 |            | 25      | 24        | 20.36               | 20.46     | 20.41     |
|          |                 |            | 50      | 0         | 20.35               | 20.35     | 20.34     |
| 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         | 21.85               | 22.13     | 22.03     |
|          |                 |            | 1       | 37        | 21.87               | 22.14     | 22.01     |
|          |                 |            | 1       | 74        | 21.86               | 22.16     | 21.89     |
|          |                 |            | 36      | 0         | 20.98               | 21.23     | 21.15     |
|          |                 |            | 36      | 16        | 21.13               | 21.26     | 21.35     |
|          |                 |            | 36      | 35        | 21.06               | 21.20     | 21.35     |
|          |                 |            | 75      | 0         | 20.98               | 21.17     | 21.05     |
|          |                 | 16QAM      | 1       | 0         | 21.54               | 21.74     | 21.20     |
|          |                 |            | 1       | 37        | 21.86               | 21.35     | 21.16     |
|          |                 |            | 1       | 74        | 21.84               | 21.26     | 21.35     |
|          |                 |            | 36      | 0         | 21.13               | 20.16     | 20.35     |
|          |                 |            | 36      | 16        | 21.16               | 20.35     | 20.35     |
|          |                 |            | 36      | 35        | 21.05               | 20.34     | 20.38     |
|          |                 |            | 75      | 0         | 20.35               | 20.34     | 20.30     |
| 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         | 21.98               | 22.13     | 22.13     |
|          |                 |            | 1       | 49        | 21.89               | 22.04     | 21.98     |
|          |                 |            | 1       | 99        | 22.06               | 22.16     | 21.89     |
|          |                 |            | 50      | 0         | 21.89               | 21.16     | 21.26     |
|          |                 |            | 50      | 24        | 21.86               | 21.34     | 21.24     |
|          |                 |            | 50      | 49        | 21.84               | 21.23     | 21.34     |
|          |                 |            | 100     | 0         | 21.06               | 21.14     | 21.13     |
|          |                 | 16QAM      | 1       | 0         | 21.28               | 21.46     | 21.26     |
|          |                 |            | 1       | 49        | 21.35               | 21.16     | 21.52     |
|          |                 |            | 1       | 99        | 21.34               | 21.26     | 21.11     |
|          |                 |            | 50      | 0         | 20.46               | 20.35     | 20.45     |
|          |                 |            | 50      | 24        | 20.56               | 20.65     | 20.45     |
|          |                 |            | 50      | 49        | 20.57               | 20.34     | 20.69     |
|          |                 |            | 100     | 0         | 20.31               | 20.34     | 20.34     |

## LTE Band 4 part

| 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         | 22.23               | 21.87     | 21.35     |
|          |                 |            | 1       | 2         | 22.24               | 21.78     | 21.78     |
|          |                 |            | 1       | 5         | 22.34               | 21.74     | 21.13     |
|          |                 |            | 3       | 0         | 22.31               | 21.87     | 21.16     |
|          |                 |            | 3       | 1         | 22.21               | 21.86     | 21.14     |
|          |                 |            | 3       | 2         | 22.22               | 21.82     | 21.36     |
|          |                 |            | 6       | 0         | 21.58               | 20.90     | 20.45     |
|          |                 | 16QAM      | 1       | 0         | 21.78               | 21.25     | 21.03     |
|          |                 |            | 1       | 2         | 21.35               | 21.32     | 21.24     |
|          |                 |            | 1       | 5         | 21.38               | 21.45     | 21.13     |
|          |                 |            | 3       | 0         | 21.58               | 20.78     | 20.78     |
|          |                 |            | 3       | 1         | 21.56               | 20.89     | 20.56     |
|          |                 |            | 3       | 2         | 21.35               | 20.86     | 20.45     |
|          |                 |            | 6       | 0         | 20.41               | 20.35     | 20.34     |
| 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         | 22.23               | 21.78     | 21.45     |
|          |                 |            | 1       | 7         | 22.24               | 21.89     | 21.46     |
|          |                 |            | 1       | 14        | 22.13               | 21.86     | 21.65     |
|          |                 |            | 8       | 0         | 21.35               | 20.99     | 21.16     |
|          |                 |            | 8       | 4         | 21.34               | 20.86     | 21.13     |
|          |                 |            | 8       | 7         | 21.38               | 20.85     | 21.16     |
|          |                 |            | 15      | 0         | 21.38               | 20.84     | 20.36     |
|          |                 | 16QAM      | 1       | 0         | 21.57               | 20.98     | 21.12     |
|          |                 |            | 1       | 7         | 21.56               | 20.96     | 21.13     |
|          |                 |            | 1       | 14        | 21.68               | 20.78     | 21.14     |
|          |                 |            | 8       | 0         | 20.64               | 20.42     | 20.46     |
|          |                 |            | 8       | 4         | 20.89               | 20.41     | 20.68     |
|          |                 |            | 8       | 7         | 20.42               | 20.46     | 20.45     |
|          |                 |            | 15      | 0         | 20.35               | 20.31     | 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         | 22.31               | 21.98     | 21.56     |
|          |                 |            | 1       | 12        | 22.23               | 21.79     | 21.78     |
|          |                 |            | 1       | 24        | 22.15               | 21.86     | 21.76     |
|          |                 |            | 12      | 0         | 21.45               | 21.16     | 21.34     |
|          |                 |            | 12      | 6         | 21.56               | 21.13     | 21.30     |
|          |                 |            | 12      | 11        | 21.47               | 21.14     | 21.12     |
|          |                 |            | 25      | 0         | 21.34               | 20.86     | 21.14     |
|          |                 | 16QAM      | 1       | 0         | 21.23               | 21.56     | 21.45     |
|          |                 |            | 1       | 12        | 21.70               | 21.13     | 21.47     |
|          |                 |            | 1       | 24        | 21.13               | 21.37     | 21.46     |
|          |                 |            | 12      | 0         | 20.45               | 20.35     | 21.31     |
|          |                 |            | 12      | 6         | 20.46               | 20.34     | 20.57     |
|          |                 |            | 12      | 11        | 20.49               | 20.45     | 20.54     |
|          |                 |            | 25      | 0         | 20.35               | 20.31     | 20.34     |

| 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         | 20.34               | 22.16     | 21.86     |
|          |                 |            | 1       | 24        | 22.16               | 22.15     | 21.87     |
|          |                 |            | 1       | 49        | 22.16               | 22.45     | 21.85     |
|          |                 |            | 25      | 0         | 21.36               | 21.13     | 21.52     |
|          |                 |            | 25      | 12        | 21.35               | 21.14     | 21.41     |
|          |                 |            | 25      | 24        | 21.38               | 21.17     | 21.35     |
|          |                 |            | 50      | 0         | 21.31               | 20.89     | 20.88     |
|          |                 | 16QAM      | 1       | 0         | 21.85               | 21.45     | 21.46     |
|          |                 |            | 1       | 24        | 21.48               | 21.14     | 21.13     |
|          |                 |            | 1       | 49        | 21.35               | 21.34     | 21.34     |
|          |                 |            | 25      | 0         | 20.85               | 20.40     | 20.34     |
|          |                 |            | 25      | 12        | 20.45               | 20.46     | 20.45     |
|          |                 |            | 25      | 24        | 20.34               | 20.43     | 20.49     |
|          |                 |            | 50      | 0         | 20.34               | 20.34     | 20.34     |
| 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         | 22.34               | 22.16     | 21.68     |
|          |                 |            | 1       | 37        | 22.14               | 22.11     | 21.87     |
|          |                 |            | 1       | 74        | 22.46               | 22.13     | 21.45     |
|          |                 |            | 36      | 0         | 21.26               | 21.45     | 21.43     |
|          |                 |            | 36      | 16        | 21.45               | 21.34     | 21.25     |
|          |                 |            | 36      | 35        | 21.35               | 21.36     | 21.34     |
|          |                 |            | 75      | 0         | 21.24               | 20.84     | 20.98     |
|          |                 | 16QAM      | 1       | 0         | 21.98               | 21.21     | 21.35     |
|          |                 |            | 1       | 37        | 21.46               | 21.34     | 21.36     |
|          |                 |            | 1       | 74        | 21.16               | 21.36     | 21.34     |
|          |                 |            | 36      | 0         | 20.58               | 21.30     | 20.68     |
|          |                 |            | 36      | 16        | 20.46               | 20.45     | 20.80     |
|          |                 |            | 36      | 35        | 20.48               | 20.35     | 20.47     |
|          |                 |            | 75      | 0         | 20.35               | 20.34     | 20.46     |
| 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         | 22.45               | 22.16     | 21.89     |
|          |                 |            | 1       | 49        | 22.13               | 22.35     | 21.78     |
|          |                 |            | 1       | 99        | 22.04               | 22.34     | 21.76     |
|          |                 |            | 50      | 0         | 21.35               | 21.45     | 21.16     |
|          |                 |            | 50      | 24        | 21.36               | 21.43     | 21.14     |
|          |                 |            | 50      | 49        | 21.47               | 21.31     | 21.32     |
|          |                 |            | 100     | 0         | 21.20               | 20.85     | 20.89     |
|          |                 | 16QAM      | 1       | 0         | 21.78               | 21.45     | 21.41     |
|          |                 |            | 1       | 49        | 21.46               | 21.58     | 21.23     |
|          |                 |            | 1       | 99        | 21.58               | 21.57     | 21.35     |
|          |                 |            | 50      | 0         | 20.65               | 20.56     | 20.45     |
|          |                 |            | 50      | 24        | 20.45               | 20.34     | 20.41     |
|          |                 |            | 50      | 49        | 20.46               | 20.45     | 20.31     |
|          |                 |            | 100     | 0         | 20.30               | 20.31     | 20.49     |

## LTE Band 5 part

| 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         | 22.15               | 22.12    | 22.15    |
|          |                 |            | 1       | 2         | 22.16               | 22.13    | 22.16    |
|          |                 |            | 1       | 5         | 22.18               | 22.02    | 22.15    |
|          |                 |            | 3       | 0         | 22.25               | 22.17    | 22.28    |
|          |                 |            | 3       | 1         | 22.23               | 22.15    | 22.25    |
|          |                 |            | 3       | 2         | 22.30               | 22.12    | 22.24    |
|          |                 |            | 6       | 0         | 21.36               | 21.16    | 21.25    |
|          |                 | 16QAM      | 1       | 0         | 21.75               | 21.18    | 22.43    |
|          |                 |            | 1       | 2         | 21.50               | 21.58    | 22.25    |
|          |                 |            | 1       | 5         | 21.75               | 21.51    | 21.30    |
|          |                 |            | 3       | 0         | 21.40               | 21.35    | 21.37    |
|          |                 |            | 3       | 1         | 21.35               | 21.24    | 21.25    |
|          |                 |            | 3       | 2         | 21.34               | 21.28    | 21.16    |
|          |                 |            | 6       | 0         | 20.37               | 20.34    | 20.30    |
| 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         | 22.16               | 22.13    | 22.17    |
|          |                 |            | 1       | 7         | 22.15               | 22.03    | 22.03    |
|          |                 |            | 1       | 14        | 22.14               | 21.63    | 22.14    |
|          |                 |            | 8       | 0         | 21.34               | 21.15    | 21.25    |
|          |                 |            | 8       | 4         | 21.35               | 21.16    | 21.32    |
|          |                 |            | 8       | 7         | 21.34               | 21.17    | 21.29    |
|          |                 |            | 15      | 0         | 21.27               | 21.19    | 21.30    |
|          |                 | 16QAM      | 1       | 0         | 21.27               | 21.48    | 21.21    |
|          |                 |            | 1       | 7         | 21.31               | 21.22    | 21.27    |
|          |                 |            | 1       | 14        | 21.36               | 21.14    | 21.24    |
|          |                 |            | 8       | 0         | 20.38               | 20.35    | 20.45    |
|          |                 |            | 8       | 4         | 20.36               | 20.36    | 20.30    |
|          |                 |            | 8       | 7         | 20.34               | 20.34    | 20.45    |
|          |                 |            | 15      | 0         | 20.34               | 20.31    | 20.31    |
| 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         | 22.13               | 22.12    | 22.13    |
|          |                 |            | 1       | 12        | 22.14               | 22.03    | 22.13    |
|          |                 |            | 1       | 24        | 22.03               | 21.98    | 22.14    |
|          |                 |            | 12      | 0         | 21.29               | 21.16    | 21.23    |
|          |                 |            | 12      | 6         | 21.24               | 21.15    | 21.28    |
|          |                 |            | 12      | 11        | 21.17               | 21.07    | 21.29    |
|          |                 |            | 25      | 0         | 21.20               | 21.08    | 21.24    |
|          |                 | 16QAM      | 1       | 0         | 21.31               | 21.03    | 21.58    |
|          |                 |            | 1       | 12        | 21.37               | 21.24    | 21.43    |
|          |                 |            | 1       | 24        | 20.65               | 21.16    | 21.09    |
|          |                 |            | 12      | 0         | 20.85               | 20.41    | 20.36    |
|          |                 |            | 12      | 6         | 20.46               | 20.32    | 20.34    |
|          |                 |            | 12      | 11        | 20.41               | 20.36    | 20.31    |
|          |                 |            | 25      | 0         | 20.31               | 20.35    | 20.34    |

| LTE Band | Bandwidth (MHz) | Modulation | RB Size | RB Offset | Average Power (dBm) |          |        |
|----------|-----------------|------------|---------|-----------|---------------------|----------|--------|
|          |                 |            |         |           | 20450               | 20525    | 20600  |
|          |                 |            |         |           | 829MHz              | 836.5MHz | 844MHz |
| 5        | 10              | QPSK       | 1       | 0         | 22.16               | 22.16    | 22.06  |
|          |                 |            | 1       | 24        | 22.02               | 22.03    | 22.10  |
|          |                 |            | 1       | 49        | 21.98               | 22.05    | 22.13  |
|          |                 |            | 25      | 0         | 21.19               | 21.15    | 21.13  |
|          |                 |            | 25      | 12        | 21.16               | 21.08    | 21.15  |
|          |                 |            | 25      | 24        | 21.12               | 21.06    | 21.17  |
|          |                 |            | 50      | 0         | 21.18               | 21.09    | 21.16  |
|          |                 | 16QAM      | 1       | 0         | 21.70               | 21.34    | 21.25  |
|          |                 |            | 1       | 24        | 21.26               | 21.15    | 21.14  |
|          |                 |            | 1       | 49        | 21.20               | 21.21    | 21.26  |
|          |                 |            | 25      | 0         | 20.30               | 20.36    | 20.34  |
|          |                 |            | 25      | 12        | 20.34               | 20.31    | 20.36  |
|          |                 |            | 25      | 24        | 20.36               | 20.35    | 20.32  |
|          |                 |            | 50      | 0         | 20.31               | 20.34    | 20.34  |

## LTE Band 7 part

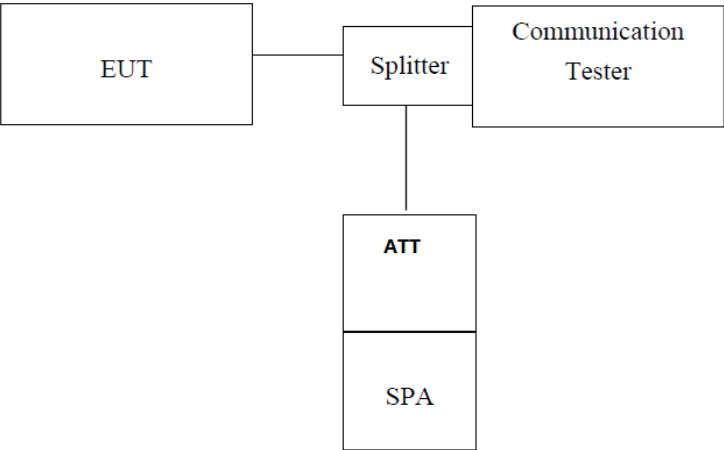
| LTE Band | Bandwidth (MHz) | Modulation | RB Size | RB Offset | Average Power (dBm) |           |           |
|----------|-----------------|------------|---------|-----------|---------------------|-----------|-----------|
|          |                 |            |         |           | 20775               | 21100     | 21425     |
|          |                 |            |         |           | 2502.5MHz           | 2535.0MHz | 2567.5MHz |
| 7        | 5               | QPSK       | 1       | 0         | 22.46               | 22.48     | 22.16     |
|          |                 |            | 1       | 12        | 22.34               | 22.43     | 21.76     |
|          |                 |            | 1       | 24        | 22.16               | 22.46     | 21.82     |
|          |                 |            | 12      | 0         | 21.51               | 22.34     | 21.16     |
|          |                 |            | 12      | 6         | 21.26               | 22.16     | 21.23     |
|          |                 |            | 12      | 11        | 21.19               | 22.14     | 21.18     |
|          |                 |            | 25      | 0         | 21.26               | 22.05     | 21.19     |
|          |                 | 16QAM      | 1       | 0         | 21.87               | 22.13     | 21.67     |
|          |                 |            | 1       | 12        | 21.46               | 21.98     | 21.13     |
|          |                 |            | 1       | 24        | 21.03               | 21.98     | 21.14     |
|          |                 |            | 12      | 0         | 20.36               | 21.56     | 20.46     |
|          |                 |            | 12      | 6         | 20.33               | 21.18     | 20.65     |
|          |                 |            | 12      | 11        | 20.34               | 21.06     | 20.43     |
|          |                 |            | 25      | 0         | 20.45               | 21.23     | 20.31     |
| 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         | 22.23               | 22.26     | 22.36     |
|          |                 |            | 1       | 24        | 22.13               | 22.13     | 22.15     |
|          |                 |            | 1       | 49        | 22.15               | 22.12     | 22.14     |
|          |                 |            | 25      | 0         | 21.46               | 21.47     | 21.45     |
|          |                 |            | 25      | 12        | 21.35               | 21.36     | 21.49     |
|          |                 |            | 25      | 24        | 21.47               | 21.24     | 21.27     |
|          |                 |            | 50      | 0         | 21.21               | 21.21     | 21.20     |
|          |                 | 16QAM      | 1       | 0         | 21.69               | 21.24     | 21.16     |
|          |                 |            | 1       | 24        | 21.54               | 20.58     | 20.69     |
|          |                 |            | 1       | 49        | 20.95               | 20.46     | 20.58     |
|          |                 |            | 25      | 0         | 20.56               | 20.43     | 20.45     |
|          |                 |            | 25      | 12        | 20.43               | 20.43     | 20.36     |
|          |                 |            | 25      | 24        | 20.47               | 20.43     | 20.34     |
|          |                 |            | 50      | 0         | 20.33               | 20.43     | 20.32     |

| 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         | 22.25               | 22.47     | 22.23     |
|          |                 |            | 1       | 37        | 22.34               | 22.32     | 22.24     |
|          |                 |            | 1       | 74        | 22.32               | 22.23     | 22.21     |
|          |                 |            | 36      | 0         | 21.56               | 21.47     | 21.46     |
|          |                 |            | 36      | 16        | 21.73               | 21.55     | 21.37     |
|          |                 |            | 36      | 35        | 21.23               | 21.23     | 21.47     |
|          |                 |            | 75      | 0         | 21.12               | 21.47     | 21.23     |
|          |                 | 16QAM      | 1       | 0         | 21.66               | 21.16     | 20.66     |
|          |                 |            | 1       | 37        | 21.58               | 21.03     | 21.23     |
|          |                 |            | 1       | 74        | 21.47               | 20.66     | 20.64     |
|          |                 |            | 36      | 0         | 20.45               | 20.63     | 20.65     |
|          |                 |            | 36      | 16        | 20.36               | 20.64     | 20.55     |
|          |                 |            | 36      | 35        | 20.32               | 20.56     | 20.84     |
|          |                 |            | 75      | 0         | 20.34               | 20.36     | 20.32     |
| 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         | 22.21               | 22.23     | 22.26     |
|          |                 |            | 1       | 49        | 22.22               | 22.19     | 22.14     |
|          |                 |            | 1       | 99        | 22.23               | 22.23     | 22.23     |
|          |                 |            | 50      | 0         | 21.56               | 21.70     | 21.77     |
|          |                 |            | 50      | 24        | 21.63               | 21.56     | 21.23     |
|          |                 |            | 50      | 49        | 21.63               | 21.36     | 21.25     |
|          |                 |            | 100     | 0         | 21.24               | 21.28     | 21.27     |
|          |                 | 16QAM      | 1       | 0         | 21.47               | 21.43     | 21.22     |
|          |                 |            | 1       | 49        | 21.21               | 21.26     | 21.13     |
|          |                 |            | 1       | 99        | 20.56               | 20.34     | 20.58     |
|          |                 |            | 50      | 0         | 20.54               | 20.44     | 20.56     |
|          |                 |            | 50      | 24        | 20.36               | 20.39     | 20.57     |
|          |                 |            | 50      | 49        | 20.35               | 20.35     | 20.33     |
|          |                 |            | 100     | 0         | 20.34               | 20.32     | 20.36     |

## LTE Band 17 part

| 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         | 22.34               | 22.42    | 22.31    |
|          |                 |            | 1       | 12        | 22.41               | 22.34    | 22.25    |
|          |                 |            | 1       | 24        | 22.35               | 22.31    | 22.15    |
|          |                 |            | 12      | 0         | 21.54               | 21.58    | 21.42    |
|          |                 |            | 12      | 6         | 21.53               | 21.45    | 21.32    |
|          |                 |            | 12      | 11        | 21.48               | 21.46    | 21.30    |
|          |                 |            | 25      | 0         | 21.43               | 21.42    | 21.29    |
|          |                 | 16QAM      | 1       | 0         | 21.41               | 21.74    | 21.35    |
|          |                 |            | 1       | 12        | 22.01               | 21.66    | 21.48    |
|          |                 |            | 1       | 24        | 21.78               | 21.57    | 21.39    |
|          |                 |            | 12      | 0         | 20.56               | 20.68    | 20.55    |
|          |                 |            | 12      | 6         | 20.59               | 20.58    | 20.54    |
|          |                 |            | 12      | 11        | 20.61               | 20.60    | 20.40    |
|          |                 |            | 25      | 0         | 20.57               | 20.53    | 20.35    |
| 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         | 22.45               | 22.45    | 22.42    |
|          |                 |            | 1       | 24        | 22.41               | 22.45    | 22.34    |
|          |                 |            | 1       | 49        | 22.35               | 22.26    | 22.31    |
|          |                 |            | 25      | 0         | 21.48               | 21.48    | 21.45    |
|          |                 |            | 25      | 12        | 21.48               | 21.44    | 21.39    |
|          |                 |            | 25      | 24        | 21.43               | 21.39    | 21.33    |
|          |                 |            | 50      | 0         | 21.40               | 21.45    | 21.43    |
|          |                 | 16QAM      | 1       | 0         | 21.57               | 21.45    | 21.75    |
|          |                 |            | 1       | 24        | 21.66               | 21.59    | 21.98    |
|          |                 |            | 1       | 49        | 21.42               | 21.14    | 21.53    |
|          |                 |            | 25      | 0         | 20.54               | 20.58    | 20.62    |
|          |                 |            | 25      | 12        | 20.58               | 20.51    | 20.49    |
|          |                 |            | 25      | 24        | 20.52               | 20.45    | 20.39    |
|          |                 |            | 50      | 0         | 20.44               | 20.47    | 20.42    |

## 6.6 Peak-to-Average Ratio

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                |
|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Requirement: | FCC part 24.232(d)                                                                                                                                                                                                                                                                                                                                                                                             |
| Limit:            | The peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.                                                                                                                                                                                                                                                                                                                                      |
| Test setup:       |  <p><i>Note: Measurement setup for testing on Antenna connector</i></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, RBW <math>\geq</math> OBW,</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                                                                                                                                                                                                                                                                                                                                                                                                         |

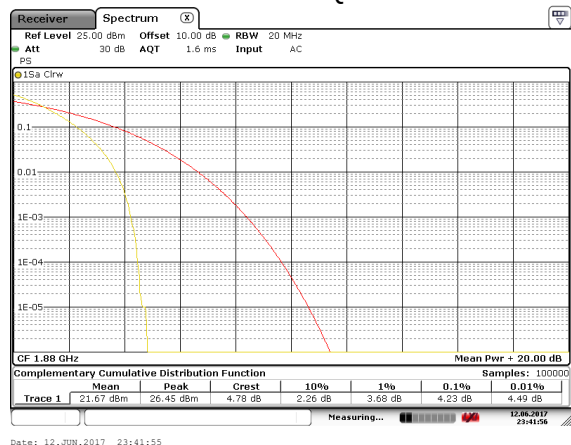
## Measurement Data:

| BW(MHz)                      | Modulation | RB Size | RB Offset | PAPR |
|------------------------------|------------|---------|-----------|------|
| LTE Band 2 (Middle Channel)  |            |         |           |      |
| 20MHz                        | QPSK       | 100     | 0         | 4.23 |
|                              | 16QAM      | 100     | 0         | 5.25 |
| LTE Band 4 (Middle Channel)  |            |         |           |      |
| 20MHz                        | QPSK       | 100     | 0         | 4.70 |
|                              | 16QAM      | 100     | 0         | 5.65 |
| LTE Band 5 (Middle Channel)  |            |         |           |      |
| 10MHz                        | QPSK       | 100     | 0         | 4.23 |
|                              | 16QAM      | 100     | 0         | 5.83 |
| LTE Band 7 (Middle Channel)  |            |         |           |      |
| 20MHz                        | QPSK       | 100     | 0         | 4.78 |
|                              | 16QAM      | 100     | 0         | 5.59 |
| LTE Band 17 (Middle Channel) |            |         |           |      |
| 10MHz                        | QPSK       | 50      | 0         | 5.10 |
|                              | 16QAM      | 50      | 0         | 6.03 |

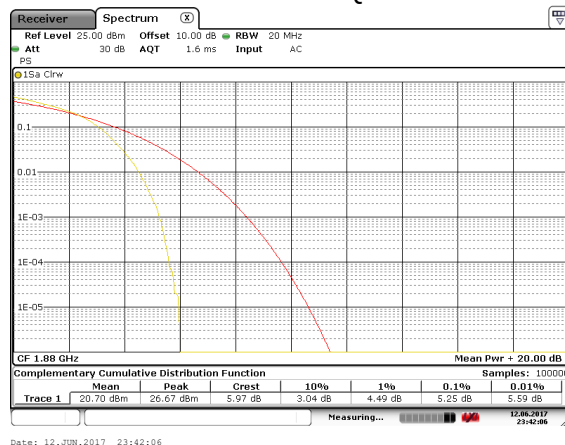
Test plots as below:

## LTE Band 2 Middle channel

Modulation: QPSK

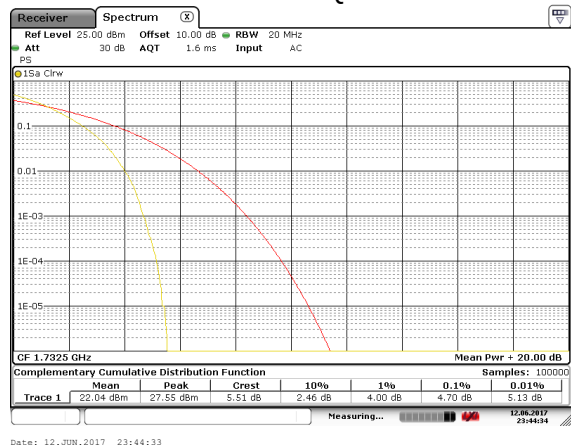


Modulation:16QAM

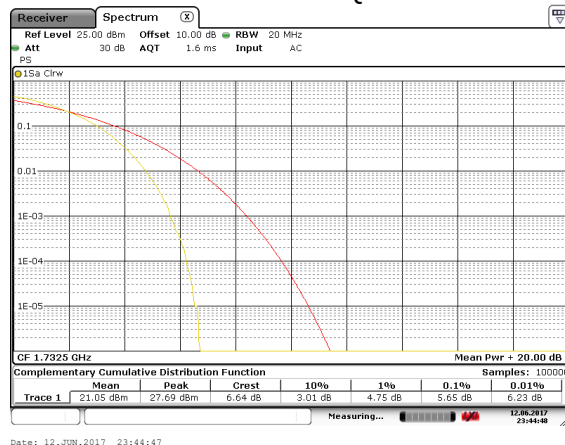


## LTE Band 4 Middle channel

Modulation: QPSK

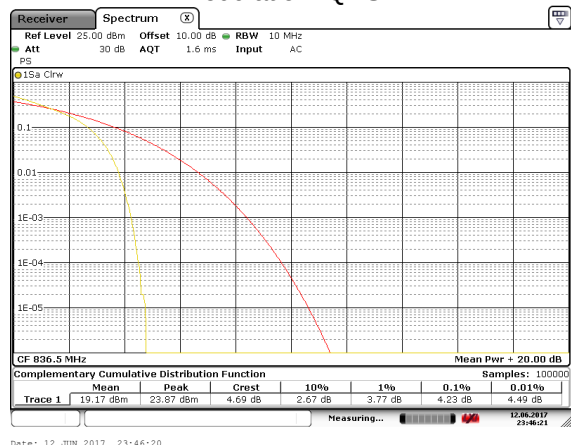


Modulation:16QAM

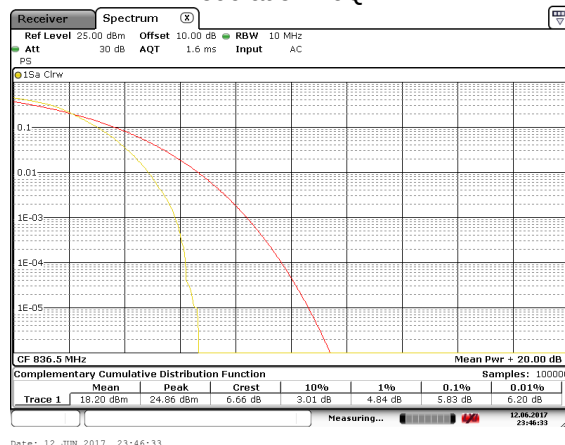


## LTE Band 5 Middle channel

Modulation: QPSK

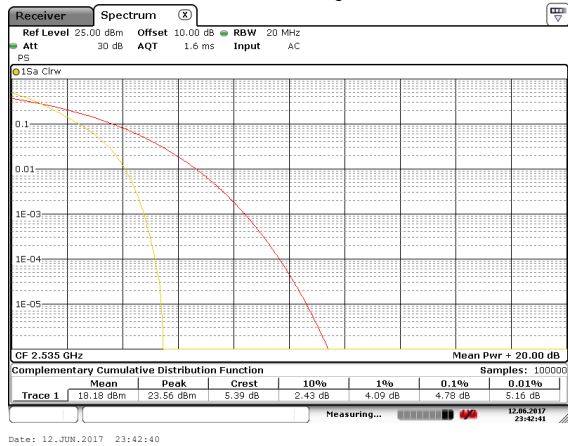


Modulation:16QAM

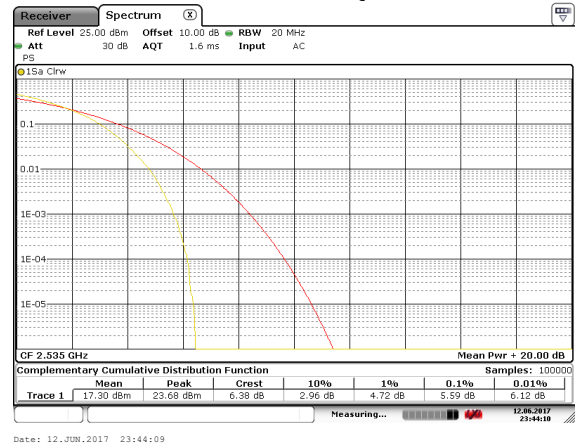


## LTE Band 7 Middle channel

Modulation: QPSK

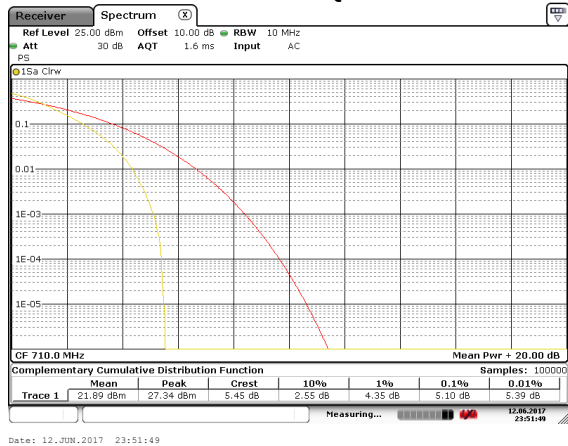


Modulation:16QAM

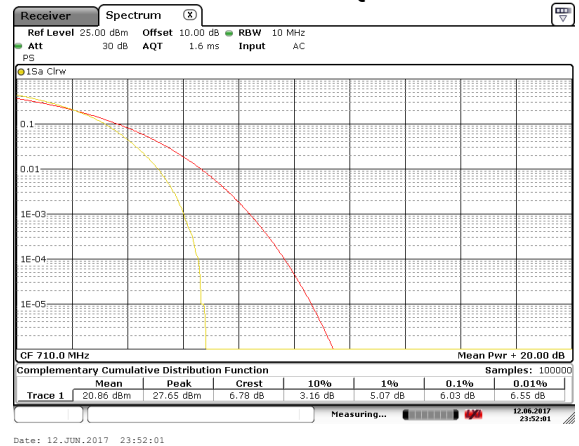


## LTE Band 17 Middle channel

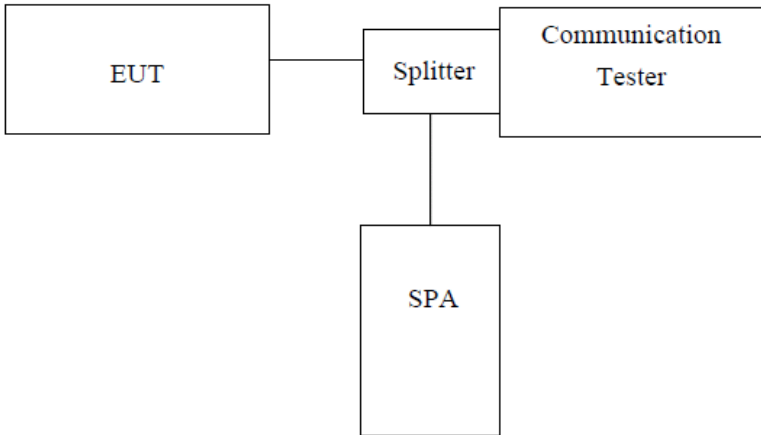
Modulation: QPSK



Modulation:16QAM



## 6.7 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:      | FCC part2.1049                                                                                                                                                                                                                                                                                                                                                                                                                |
| Test setup:       |  <p><i>Note: Measurement setup for testing on Antenna connector</i></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:**

| EUT Mode | Channel | Frequency(MHz) | Modulation | 99% OBW (kHz) | -26dBcEBW (kHz) |
|----------|---------|----------------|------------|---------------|-----------------|
| 1.4MHz   | 18607   | 1850.70        | 16QAM      | 1098          | 1260            |
|          |         |                | QPSK       | 1104          | 1272            |
|          | 18900   | 1880.00        | 16QAM      | 1098          | 1254            |
|          |         |                | QPSK       | 1104          | 1260            |
|          | 19193   | 1909.30        | 16QAM      | 1092          | 1242            |
|          |         |                | QPSK       | 1104          | 1278            |
| 3MHz     | 18615   | 1851.50        | 16QAM      | 2724          | 3000            |
|          |         |                | QPSK       | 2736          | 3024            |
|          | 18900   | 1880.00        | 16QAM      | 2724          | 3000            |
|          |         |                | QPSK       | 2736          | 3048            |
|          | 19185   | 1908.50        | 16QAM      | 2748          | 3012            |
|          |         |                | QPSK       | 2748          | 3060            |
| 5MHz     | 18625   | 1852.50        | 16QAM      | 4500          | 4960            |
|          |         |                | QPSK       | 4540          | 5040            |
|          | 18900   | 1880.00        | 16QAM      | 4520          | 4980            |
|          |         |                | QPSK       | 4520          | 5060            |
|          | 19175   | 1907.50        | 16QAM      | 4520          | 5040            |
|          |         |                | QPSK       | 4540          | 5000            |
| 10MHz    | 18650   | 1855.00        | 16QAM      | 9080          | 10240           |
|          |         |                | QPSK       | 9160          | 10200           |
|          | 18900   | 1880.00        | 16QAM      | 9080          | 10120           |
|          |         |                | QPSK       | 9080          | 10280           |
|          | 19150   | 1905.00        | 16QAM      | 9080          | 10120           |
|          |         |                | QPSK       | 9080          | 10200           |
| 15MHz    | 18675   | 1857.50        | 16QAM      | 13500         | 14760           |
|          |         |                | QPSK       | 13560         | 14820           |
|          | 18900   | 1880.00        | 16QAM      | 13440         | 14700           |
|          |         |                | QPSK       | 13560         | 14940           |
|          | 19125   | 1902.50        | 16QAM      | 13560         | 14580           |
|          |         |                | QPSK       | 13500         | 14760           |
| 20MHz    | 18700   | 1860.00        | 16QAM      | 17920         | 19120           |
|          |         |                | QPSK       | 18000         | 19360           |
|          | 18900   | 1880.00        | 16QAM      | 17920         | 19200           |
|          |         |                | QPSK       | 18000         | 19600           |
|          | 19100   | 1900.00        | 16QAM      | 17840         | 19360           |
|          |         |                | QPSK       | 18000         | 19520           |

**LTE Band 4 part:**

| EUT Mode | Channel | Frequency(MHz) | Modulation | 99% OBW (kHz) | -26dBcEBW (kHz) |
|----------|---------|----------------|------------|---------------|-----------------|
| 1.4MHz   | 19957   | 1710.7         | 16QAM      | 1104          | 1266            |
|          |         |                | QPSK       | 1098          | 1260            |
|          | 20175   | 1732.5         | 16QAM      | 1092          | 1248            |
|          |         |                | QPSK       | 1098          | 1260            |
|          | 20393   | 1754.3         | 16QAM      | 1092          | 1266            |
|          |         |                | QPSK       | 1104          | 1260            |
| 3MHz     | 19965   | 1711.5         | 16QAM      | 2724          | 3000            |
|          |         |                | QPSK       | 2736          | 3036            |
|          | 20175   | 1732.5         | 16QAM      | 2736          | 2952            |
|          |         |                | QPSK       | 2736          | 3036            |
|          | 20385   | 1750.5         | 16QAM      | 2736          | 2976            |
|          |         |                | QPSK       | 2736          | 3036            |
| 5MHz     | 19975   | 1712.5         | 16QAM      | 4520          | 4960            |
|          |         |                | QPSK       | 4540          | 5020            |
|          | 20175   | 1732.5         | 16QAM      | 4500          | 4940            |
|          |         |                | QPSK       | 4520          | 5000            |
|          | 20375   | 1752.5         | 16QAM      | 4520          | 4940            |
|          |         |                | QPSK       | 4520          | 5000            |
| 10MHz    | 20000   | 1715.0         | 16QAM      | 9080          | 10040           |
|          |         |                | QPSK       | 9120          | 10160           |
|          | 20175   | 1732.5         | 16QAM      | 9080          | 10040           |
|          |         |                | QPSK       | 9120          | 10280           |
|          | 20350   | 1750.0         | 16QAM      | 9080          | 10080           |
|          |         |                | QPSK       | 9120          | 10280           |
| 15MHz    | 20025   | 1717.5         | 16QAM      | 13560         | 14760           |
|          |         |                | QPSK       | 13560         | 14820           |
|          | 20175   | 1732.5         | 16QAM      | 13560         | 14520           |
|          |         |                | QPSK       | 13500         | 14880           |
|          | 20325   | 1747.5         | 16QAM      | 13500         | 14760           |
|          |         |                | QPSK       | 13500         | 15060           |
| 20MHz    | 20050   | 1720.0         | 16QAM      | 17920         | 19200           |
|          |         |                | QPSK       | 17920         | 19440           |
|          | 20175   | 1732.5         | 16QAM      | 17920         | 19280           |
|          |         |                | QPSK       | 17920         | 19520           |
|          | 20300   | 1745.0         | 16QAM      | 17920         | 19200           |
|          |         |                | QPSK       | 18080         | 19440           |

## LTE Band 5 part:

| EUT Mode | Channel | Frequency (MHz) | Modulation | 99% OBW (kHz) | -26dB EBW (kHz) |
|----------|---------|-----------------|------------|---------------|-----------------|
| 1.4MHz   | 20407   | 824.70          | 16QAM      | 1092          | 1254            |
|          |         |                 | QPSK       | 1092          | 1272            |
|          | 20525   | 836.50          | 16QAM      | 1092          | 1254            |
|          |         |                 | QPSK       | 1098          | 1260            |
|          | 20643   | 848.30          | 16QAM      | 1104          | 1272            |
|          |         |                 | QPSK       | 1098          | 1272            |
| 3MHz     | 20415   | 825.50          | 16QAM      | 2724          | 3000            |
|          |         |                 | QPSK       | 2748          | 3012            |
|          | 20525   | 836.50          | 16QAM      | 2700          | 3000            |
|          |         |                 | QPSK       | 2736          | 3036            |
|          | 20635   | 847.50          | 16QAM      | 2712          | 3012            |
|          |         |                 | QPSK       | 2748          | 3036            |
| 5MHz     | 20425   | 826.50          | 16QAM      | 4500          | 4940            |
|          |         |                 | QPSK       | 4520          | 5020            |
|          | 20525   | 836.50          | 16QAM      | 4500          | 4960            |
|          |         |                 | QPSK       | 4520          | 5000            |
|          | 20625   | 846.50          | 16QAM      | 4520          | 4960            |
|          |         |                 | QPSK       | 4520          | 5060            |
| 10MHz    | 20450   | 829.00          | 16QAM      | 9080          | 10240           |
|          |         |                 | QPSK       | 9120          | 10200           |
|          | 20525   | 836.50          | 16QAM      | 9080          | 10000           |
|          |         |                 | QPSK       | 9120          | 10280           |
|          | 20600   | 844.00          | 16QAM      | 9080          | 10040           |
|          |         |                 | QPSK       | 9080          | 10160           |

## LTE Band 7 part:

| EUT Mode | Channel | Frequency (MHz) | Modulation | 99% OBW (kHz) | -26dB EBW (kHz) |
|----------|---------|-----------------|------------|---------------|-----------------|
| 5MHz     | 20775   | 2502.5          | 16QAM      | 4480          | 4940            |
|          |         |                 | QPSK       | 4520          | 4980            |
|          | 21100   | 2535.0          | 16QAM      | 4520          | 4940            |
|          |         |                 | QPSK       | 4520          | 4980            |
|          | 21425   | 2567.5          | 16QAM      | 4520          | 4920            |
|          |         |                 | QPSK       | 4520          | 5040            |
| 10MHz    | 20800   | 2505.0          | 16QAM      | 9080          | 10040           |
|          |         |                 | QPSK       | 9120          | 10160           |
|          | 21100   | 2535.0          | 16QAM      | 9080          | 9880            |
|          |         |                 | QPSK       | 9080          | 10320           |
|          | 21400   | 2565.0          | 16QAM      | 9080          | 10080           |
|          |         |                 | QPSK       | 9080          | 10160           |
| 15MHz    | 20825   | 2507.5          | 16QAM      | 13500         | 14760           |
|          |         |                 | QPSK       | 13560         | 15000           |
|          | 21100   | 2535.0          | 16QAM      | 13440         | 14580           |
|          |         |                 | QPSK       | 13500         | 14820           |
|          | 21375   | 2562.5          | 16QAM      | 13500         | 14700           |
|          |         |                 | QPSK       | 13500         | 14940           |
| 20MHz    | 20850   | 2510.0          | 16QAM      | 17920         | 19120           |
|          |         |                 | QPSK       | 18000         | 19440           |
|          | 21100   | 2535.0          | 16QAM      | 17920         | 19280           |
|          |         |                 | QPSK       | 17920         | 19440           |
|          | 21350   | 2560.0          | 16QAM      | 18000         | 19280           |
|          |         |                 | QPSK       | 17920         | 19360           |

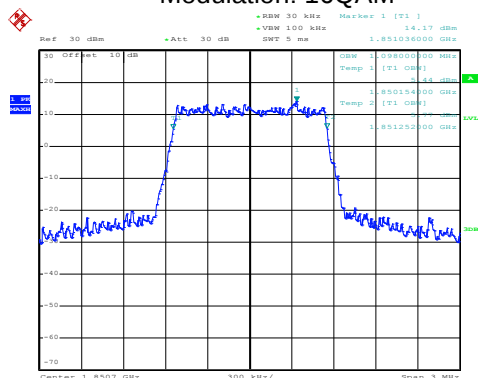
**LTE Band 17 part:**

| EUT Mode | Channel | Frequency (MHz) | Modulation | 99% OBW (kHz) | -26dB EBW (kHz) |
|----------|---------|-----------------|------------|---------------|-----------------|
| 5MHz     | 23755   | 706.5           | 16QAM      | 4520          | 4920            |
|          |         |                 | QPSK       | 4540          | 5080            |
|          | 23790   | 710.0           | 16QAM      | 4500          | 4920            |
|          |         |                 | QPSK       | 4540          | 4940            |
|          | 23825   | 713.5           | 16QAM      | 4520          | 4840            |
|          |         |                 | QPSK       | 4500          | 5000            |
| 10MHz    | 23780   | 709.0           | 16QAM      | 9080          | 10080           |
|          |         |                 | QPSK       | 9080          | 10240           |
|          | 23790   | 710.0           | 16QAM      | 9040          | 9960            |
|          |         |                 | QPSK       | 9040          | 10160           |
|          | 23800   | 711.0           | 16QAM      | 9000          | 10080           |
|          |         |                 | QPSK       | 9040          | 10120           |

Test plot as follows:  
LTE Band 2 part

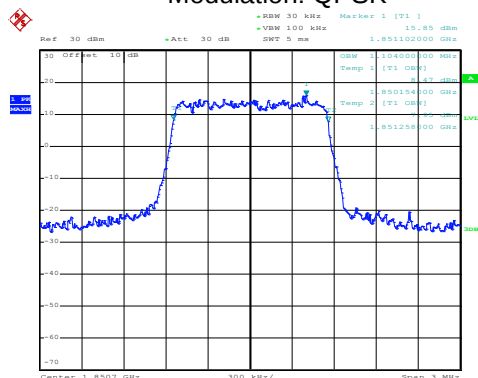
Test Item: 99% Occupancy bandwidth  
BW: 1.4MHz

Modulation: 16QAM



Date: 9.MAY.2017 20:36:05

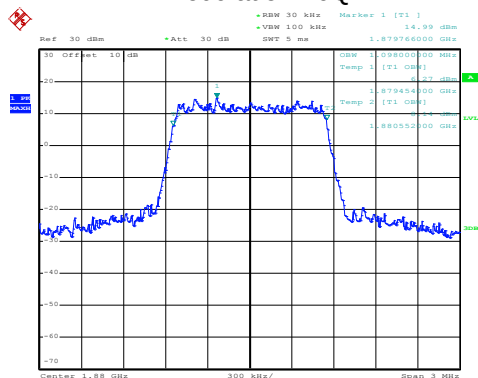
Modulation: QPSK



Date: 9.MAY.2017 20:36:01

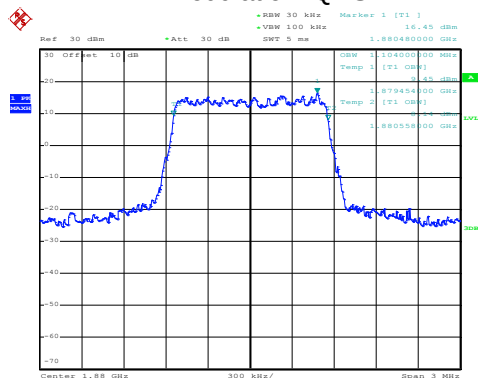
Lowest channel

Modulation: 16QAM



Date: 9.MAY.2017 20:36:30

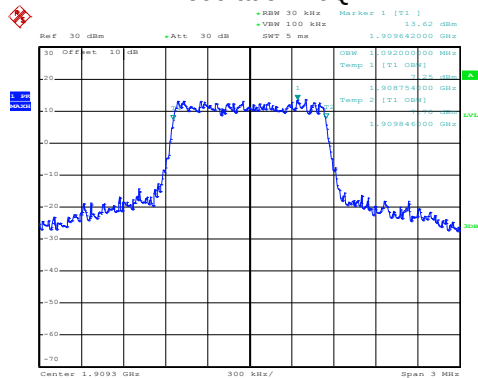
Modulation: QPSK



Date: 9.MAY.2017 20:36:25

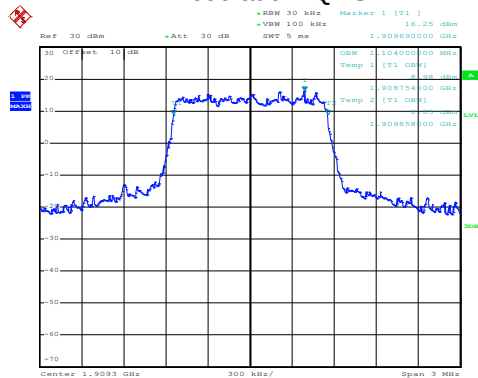
Middle channel

Modulation: 16QAM



Date: 9.MAY.2017 20:37:29

Modulation: QPSK

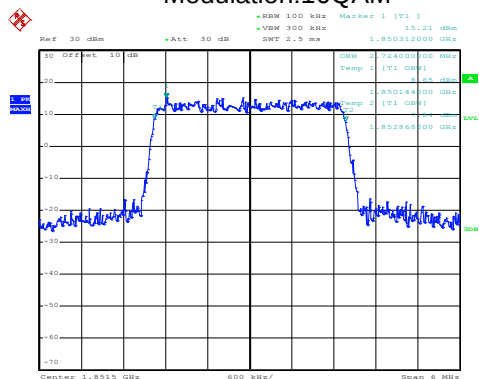


Date: 9.MAY.2017 20:37:25

Highest channel

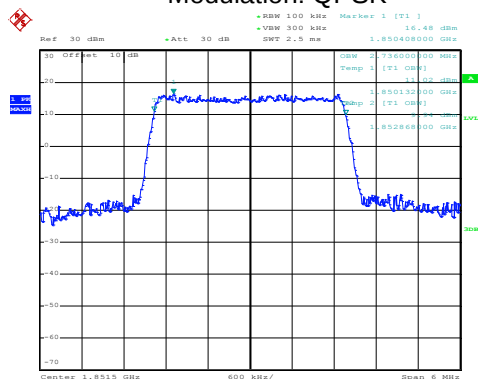
Test Item: 99% Occupancy bandwidth  
BW: 3MHz

Modulation: 16QAM



Date: 9.MAY.2017 20:38:18

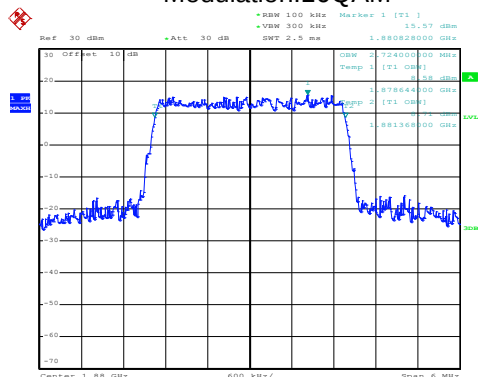
Modulation: QPSK



Date: 9.MAY.2017 20:38:14

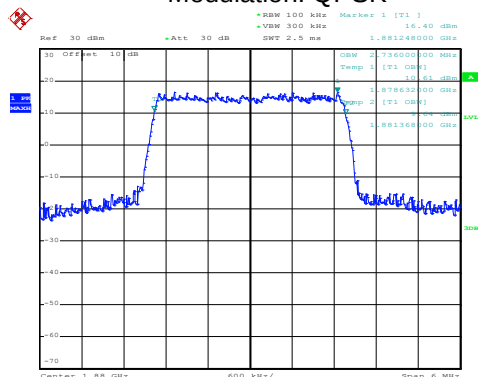
Lowest channel

Modulation: 16QAM



Date: 9.MAY.2017 20:39:01

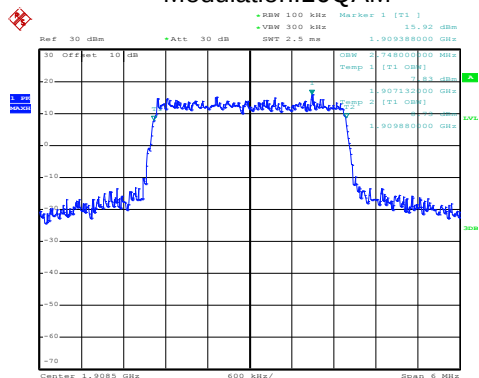
Modulation: QPSK



Date: 9.MAY.2017 20:38:57

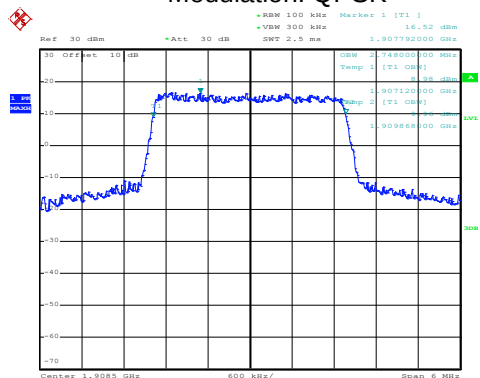
Middle channel

Modulation: 16QAM



Date: 9.MAY.2017 20:39:20

Modulation: QPSK

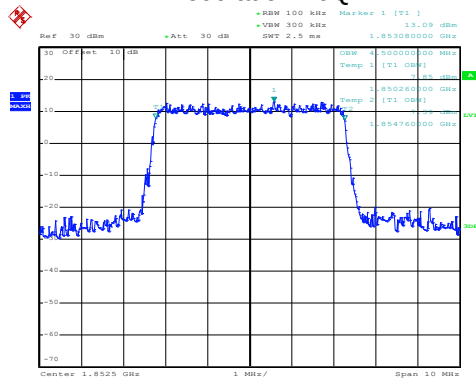


Date: 9.MAY.2017 20:39:16

Highest channel

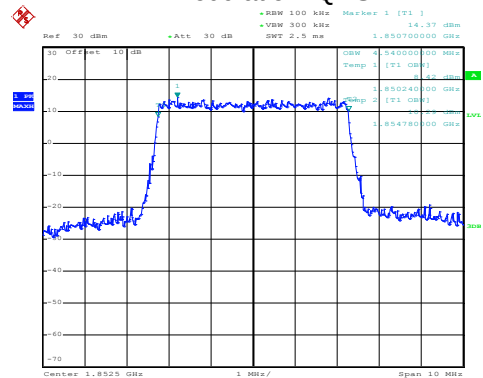
Test Item:99% Occupy bandwidth  
BW: 5MHz

Modulation:16QAM



Date: 9.MAY.2017 20:40:24

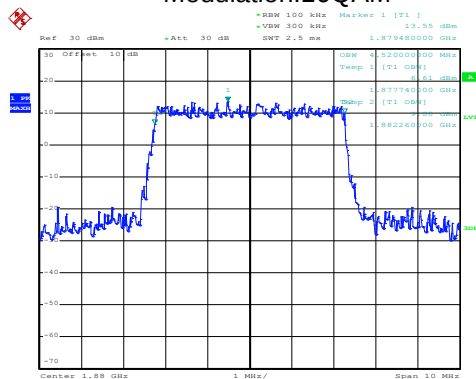
Modulation: QPSK



Date: 9.MAY.2017 20:40:19

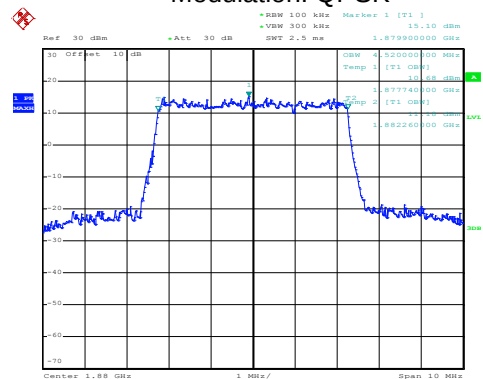
Lowest channel

Modulation:16QAM



Date: 9.MAY.2017 20:40:45

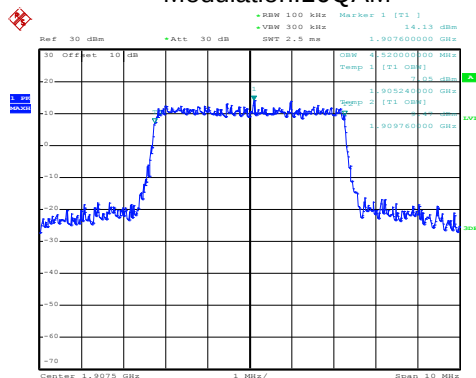
Modulation: QPSK



Date: 9.MAY.2017 20:40:40

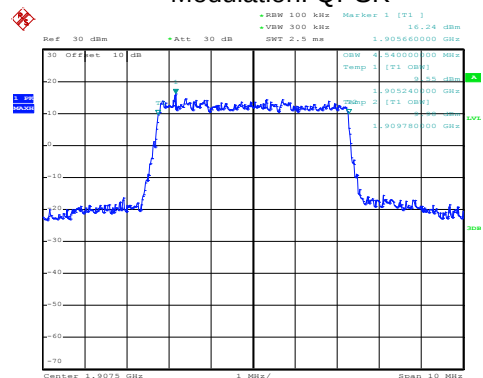
Middle channel

Modulation:16QAM



Date: 9.MAY.2017 20:41:38

Modulation: QPSK

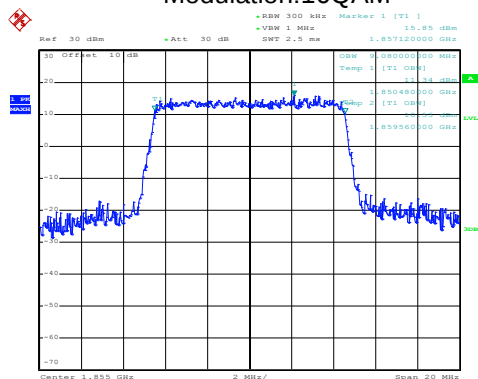


Date: 9.MAY.2017 20:41:33

Highest channel

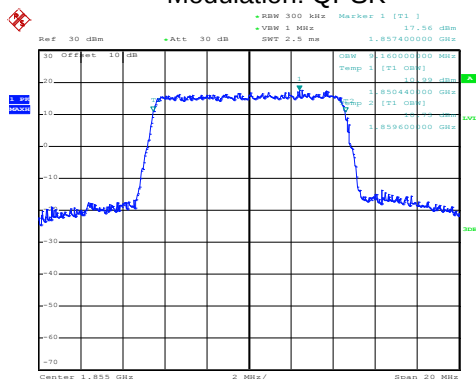
Test Item: 99% Occupancy bandwidth  
BW: 10MHz

Modulation: 16QAM



Date: 9.MAY.2017 20:42:21

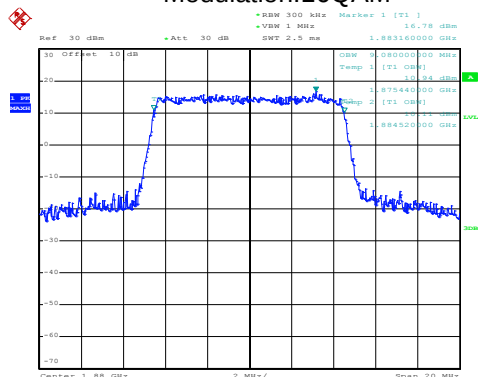
Modulation: QPSK



Date: 9.MAY.2017 20:42:17

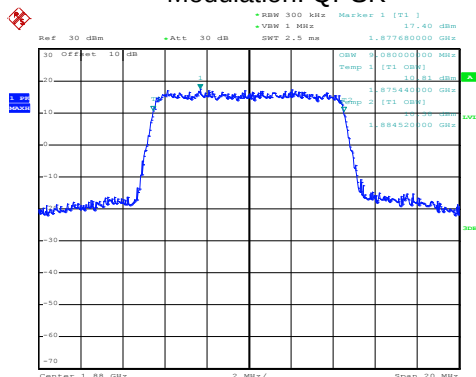
Lowest channel

Modulation: 16QAM



Date: 9.MAY.2017 20:43:16

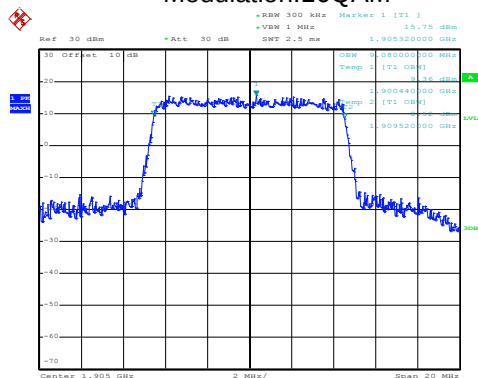
Modulation: QPSK



Date: 9.MAY.2017 20:43:11

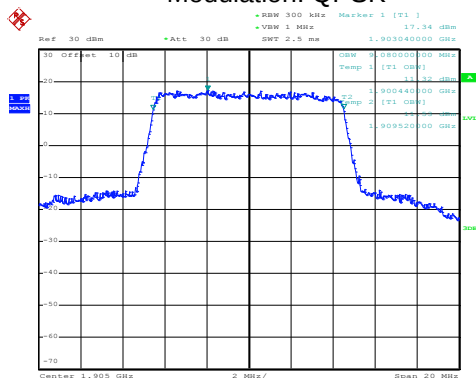
Middle channel

Modulation: 16QAM



Date: 9.MAY.2017 20:45:58

Modulation: QPSK

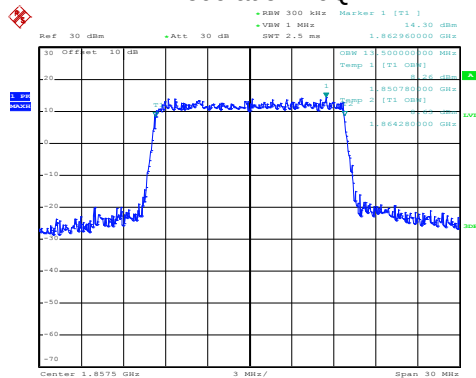


Date: 9.MAY.2017 20:45:53

Highest channel

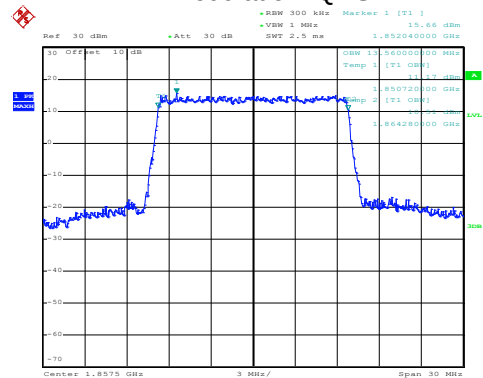
Test Item:99% Occupy bandwidth  
BW: 15MHz

Modulation:16QAM



Date: 9.MAY.2017 20:48:22

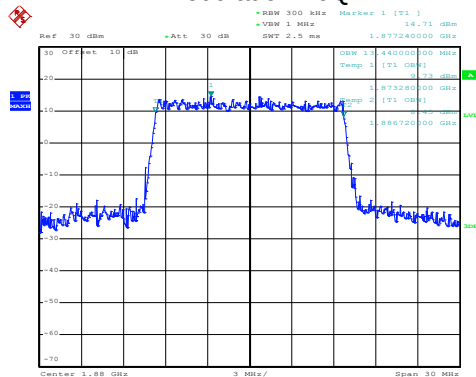
Modulation: QPSK



Date: 9.MAY.2017 20:48:16

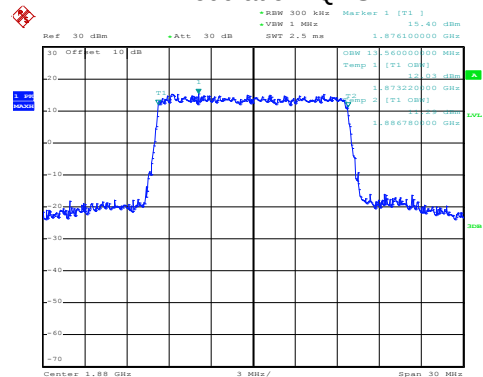
Lowest channel

Modulation:16QAM



Date: 9.MAY.2017 20:49:07

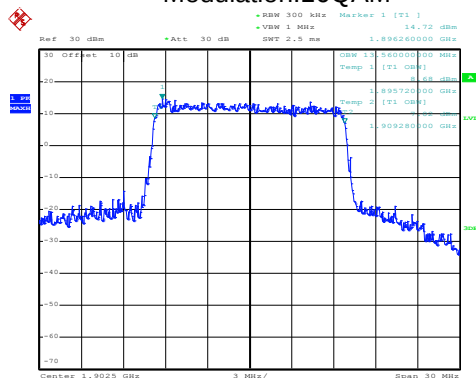
Modulation: QPSK



Date: 9.MAY.2017 20:49:03

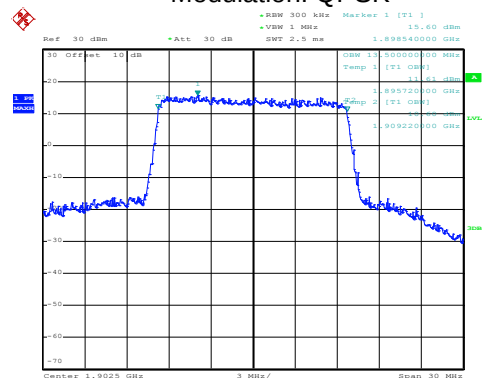
Middle channel

Modulation:16QAM



Date: 9.MAY.2017 20:49:30

Modulation: QPSK

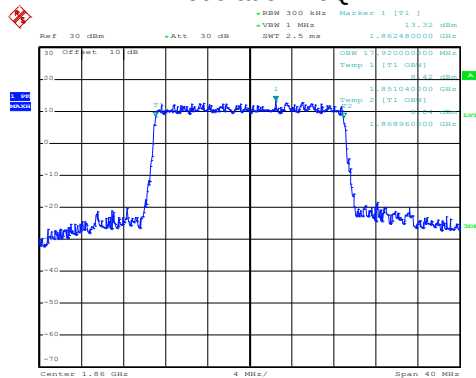


Date: 9.MAY.2017 20:49:26

Highest channel

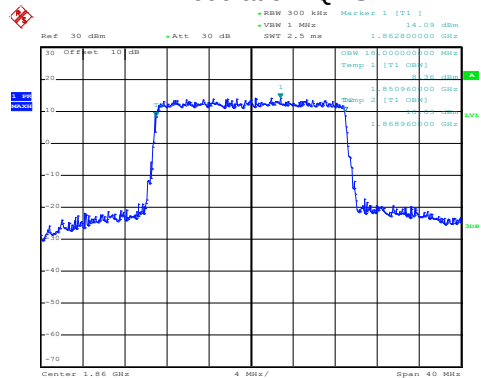
Test Item: 99% Occupancy bandwidth  
BW: 20MHz

Modulation: 16QAM



Date: 9.MAY.2017 20:50:28

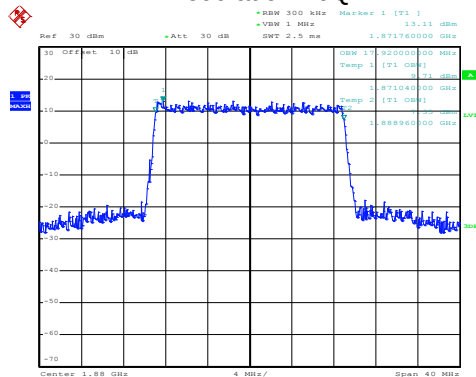
Modulation: QPSK



Date: 9.MAY.2017 20:50:23

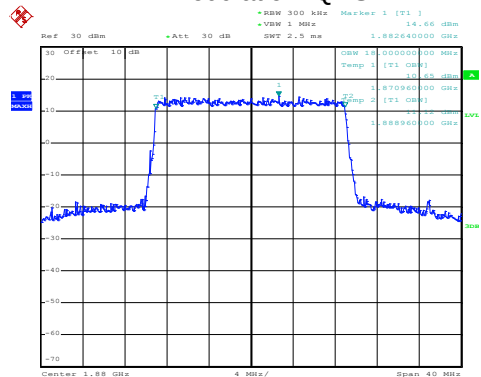
Lowest channel

Modulation: 16QAM



Date: 9.MAY.2017 20:50:52

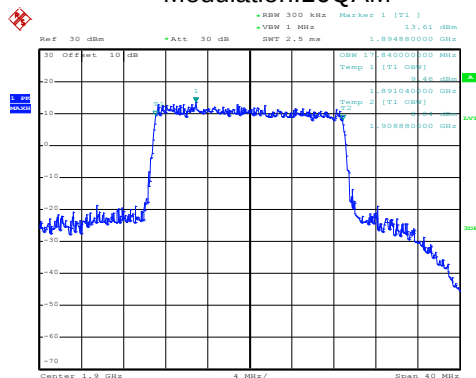
Modulation: QPSK



Date: 9.MAY.2017 20:50:47

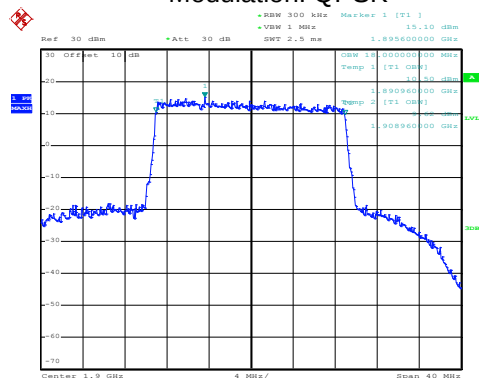
Middle channel

Modulation: 16QAM



Date: 9.MAY.2017 20:51:35

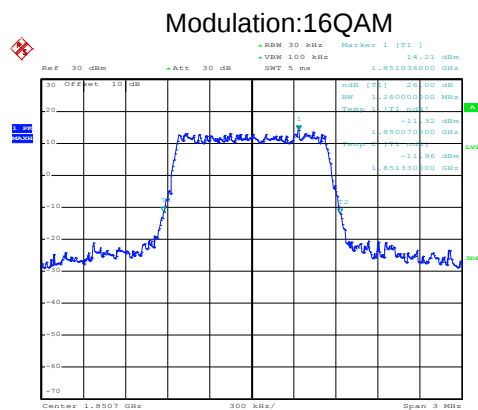
Modulation: QPSK



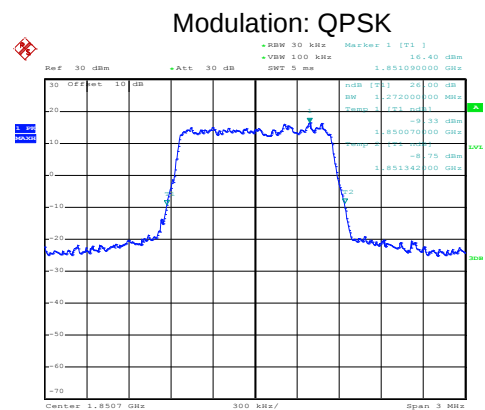
Date: 9.MAY.2017 20:51:31

Highest channel

Test Item:-26dBc bandwidth  
BW: 1.4MHz

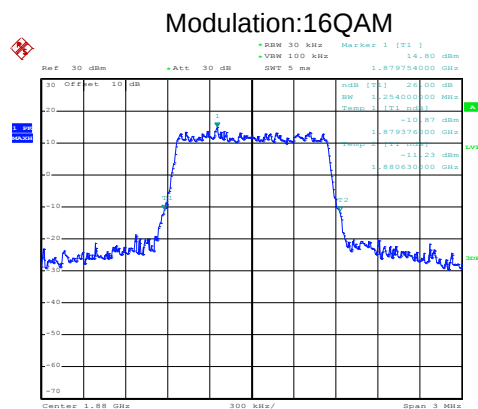


Date: 9.MAY.2017 20:35:54

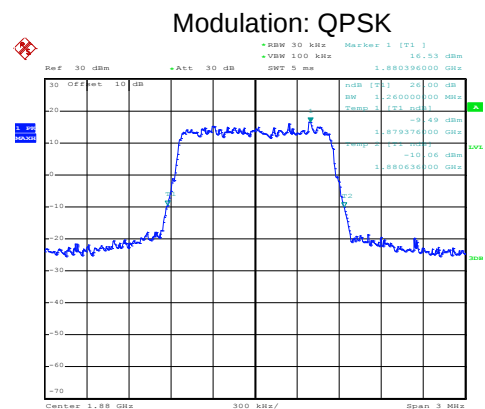


Date: 9.MAY.2017 20:35:49

Lowest channel

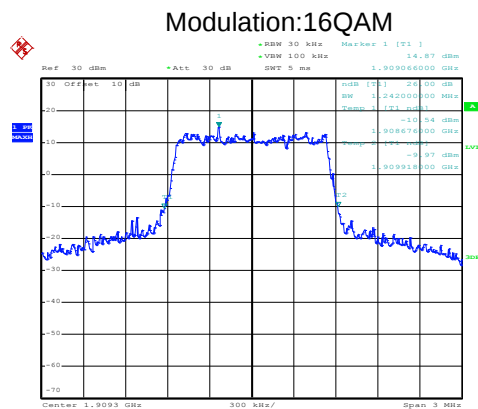


Date: 9.MAY.2017 20:36:41

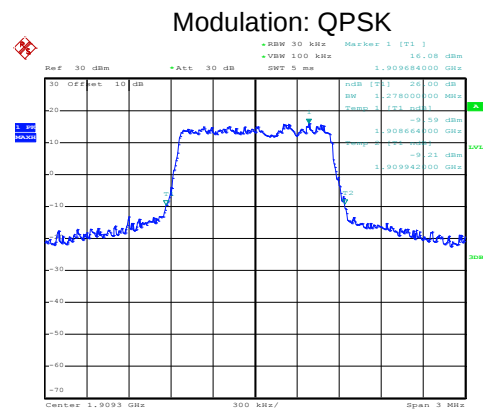


Date: 9.MAY.2017 20:36:37

Middle channel



Date: 9.MAY.2017 20:37:15

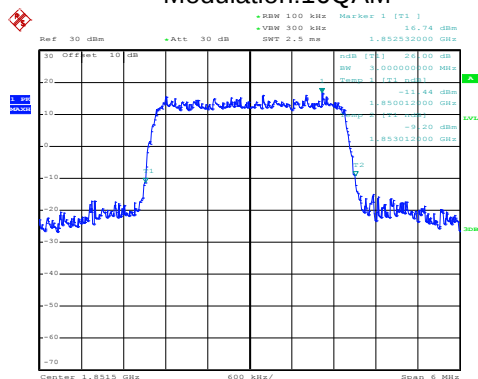


Date: 9.MAY.2017 20:37:11

Highest channel

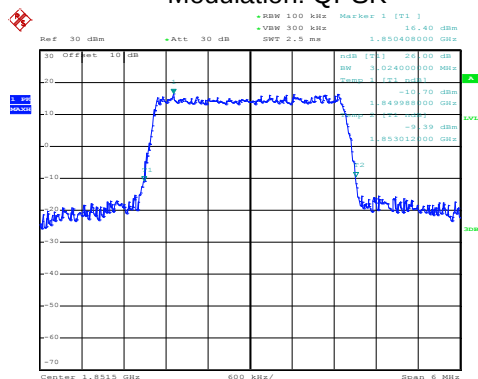
Test Item:-26dBc bandwidth  
BW: 3MHz

Modulation:16QAM



Date: 9.MAY.2017 20:38:29

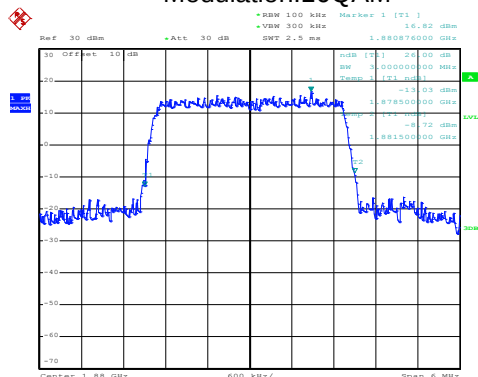
Modulation: QPSK



Date: 9.MAY.2017 20:38:25

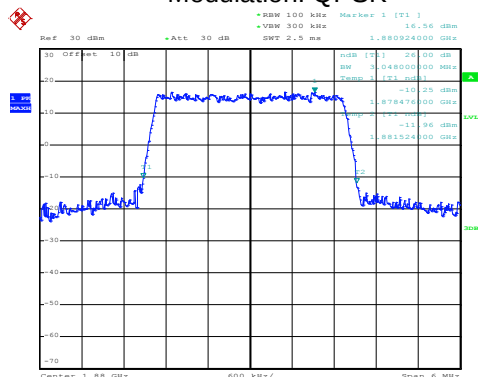
Lowest channel

Modulation:16QAM



Date: 9.MAY.2017 20:38:50

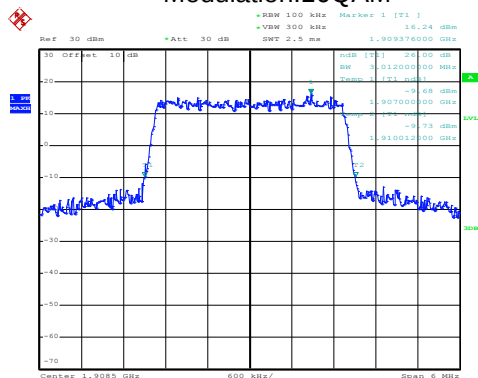
Modulation: QPSK



Date: 9.MAY.2017 20:38:46

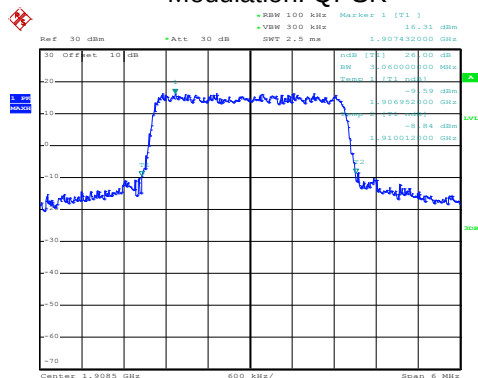
Middle channel

Modulation:16QAM



Date: 9.MAY.2017 20:39:31

Modulation: QPSK

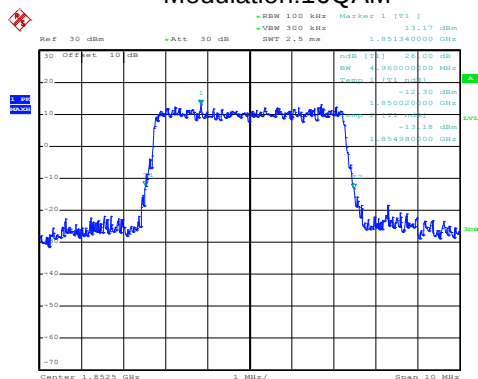


Date: 9.MAY.2017 20:39:27

Highest channel

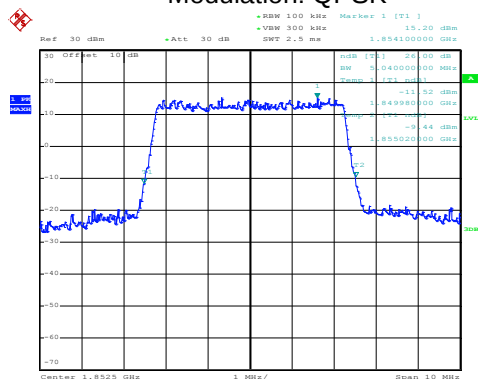
Test Item:-26dBc bandwidth  
BW: 5MHz

Modulation:16QAM



Date: 9.MAY.2017 20:40:13

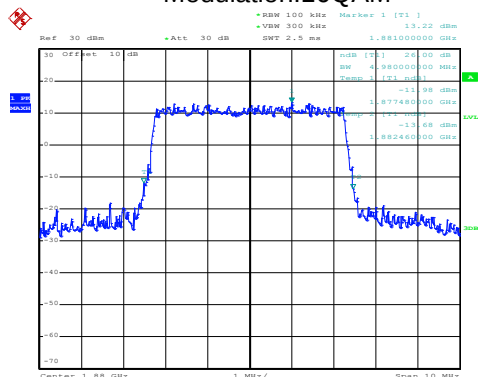
Modulation: QPSK



Date: 9.MAY.2017 20:40:09

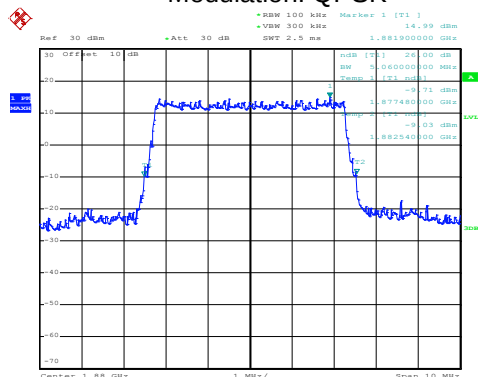
Lowest channel

Modulation:16QAM



Date: 9.MAY.2017 20:40:57

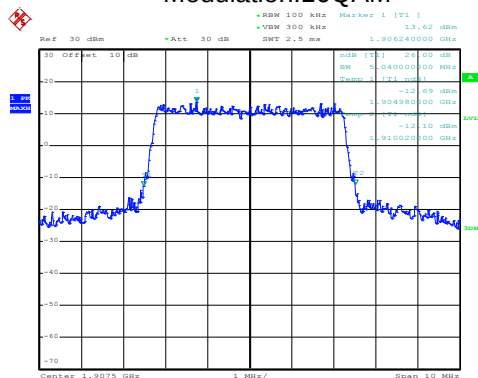
Modulation: QPSK



Date: 9.MAY.2017 20:40:52

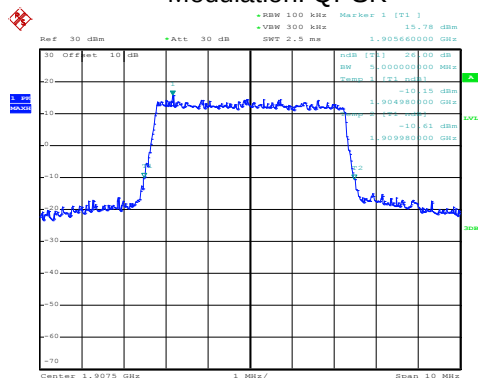
Middle channel

Modulation:16QAM



Date: 9.MAY.2017 20:41:25

Modulation: QPSK

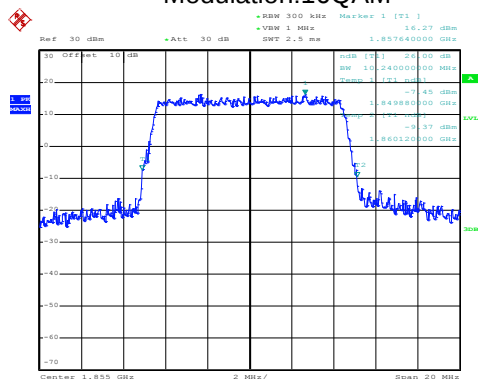


Date: 9.MAY.2017 20:41:18

Highest channel

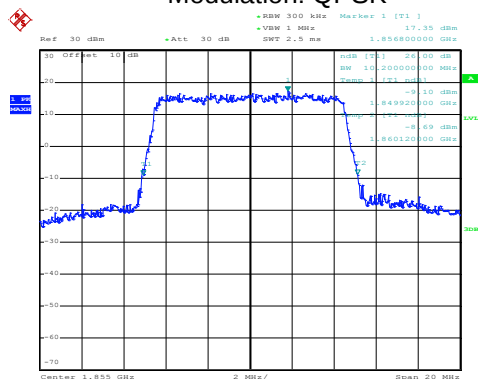
Test Item:-26dBc bandwidth  
BW: 10MHz

Modulation:16QAM



Date: 9.MAY.2017 20:42:34

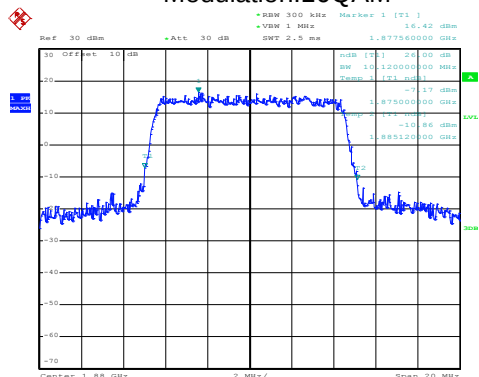
Modulation: QPSK



Date: 9.MAY.2017 20:42:28

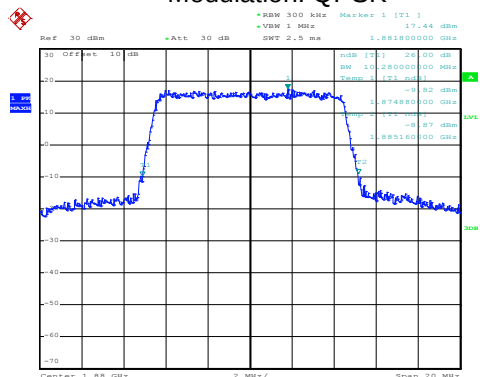
Lowest channel

Modulation:16QAM



Date: 9.MAY.2017 20:43:03

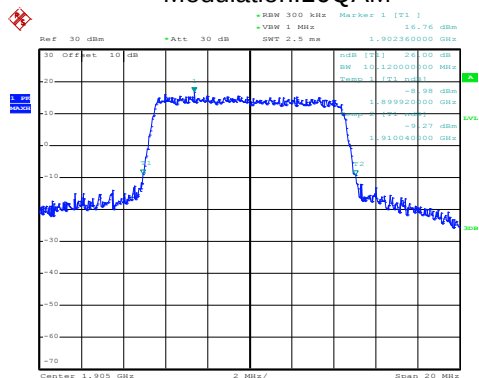
Modulation: QPSK



Date: 9.MAY.2017 20:42:59

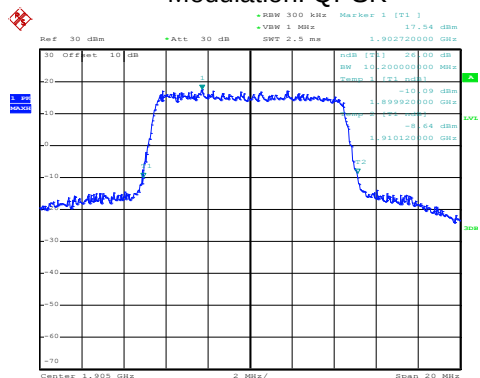
Middle channel

Modulation:16QAM



Date: 9.MAY.2017 20:46:11

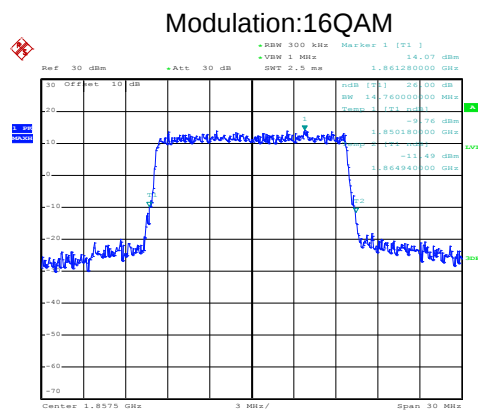
Modulation: QPSK



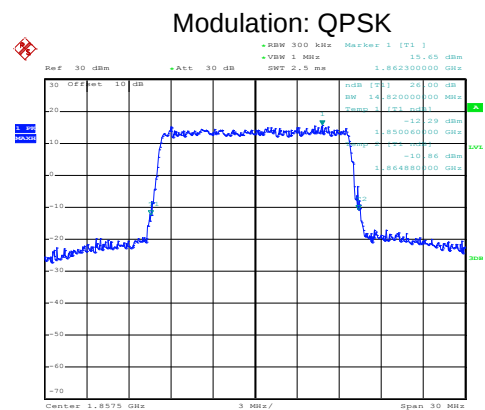
Date: 9.MAY.2017 20:46:05

Highest channel

Test Item:-26dBc bandwidth  
BW: 15MHz

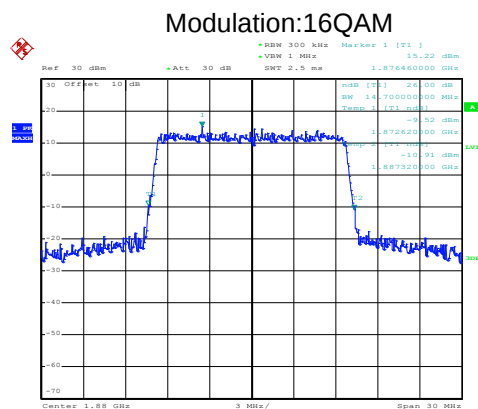


Date: 9.MAY.2017 20:48:34

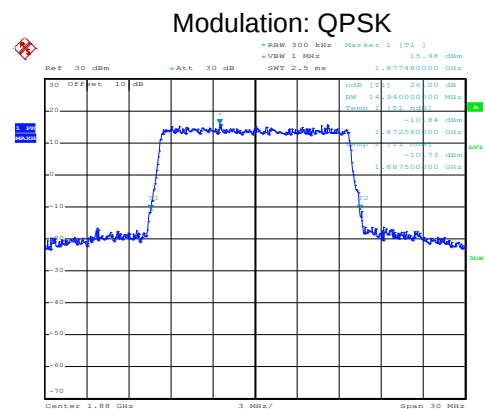


Date: 9.MAY.2017 20:48:30

Lowest channel

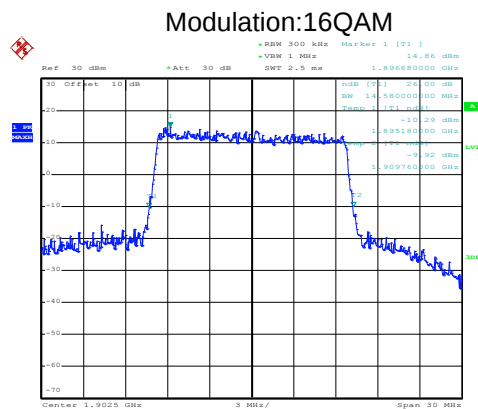


Date: 9.MAY.2017 20:48:56

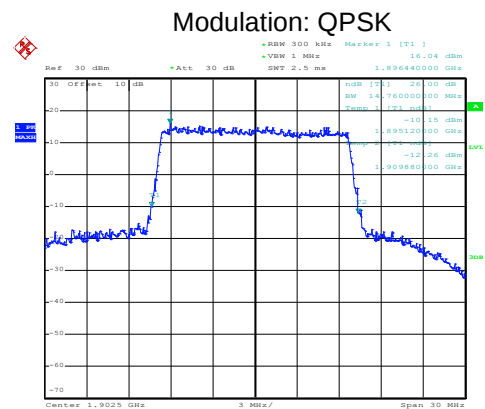


Date: 9.MAY.2017 20:48:52

Middle channel



Date: 9.MAY.2017 20:49:41

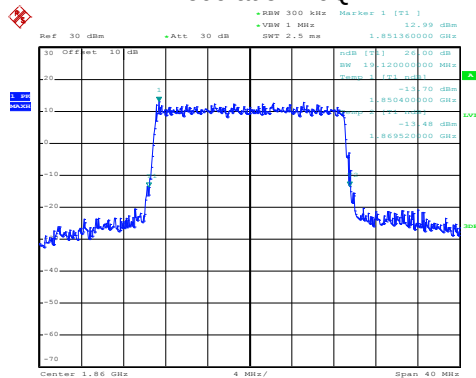


Date: 9.MAY.2017 20:49:37

Highest channel

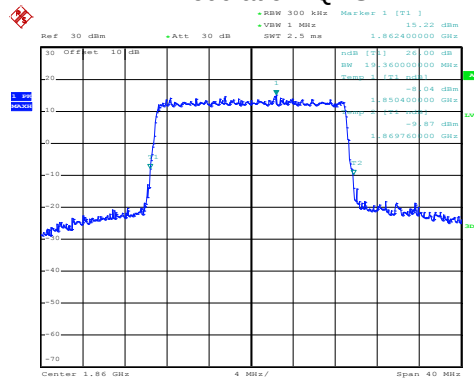
Test Item:-26dBc bandwidth  
BW: 20MHz

Modulation:16QAM



Date: 9.MAY.2017 20:50:15

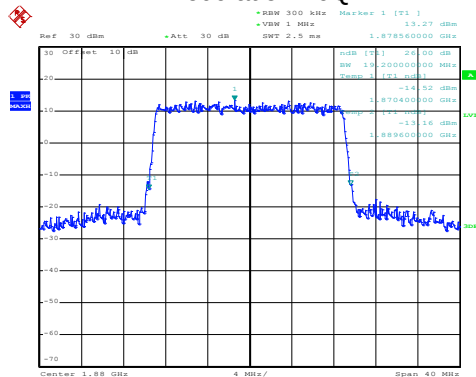
Modulation: QPSK



Date: 9.MAY.2017 20:50:11

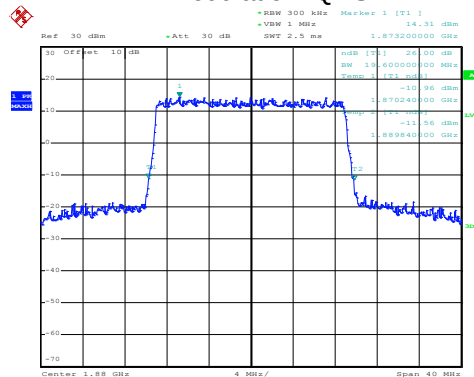
Lowest channel

Modulation:16QAM



Date: 9.MAY.2017 20:51:03

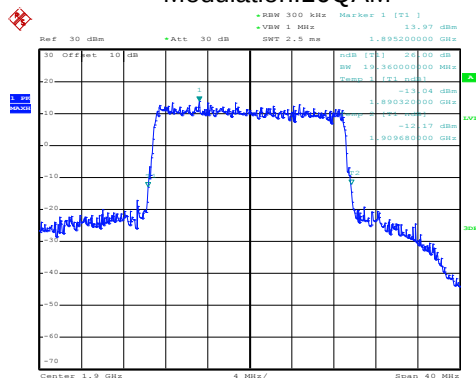
Modulation: QPSK



Date: 9.MAY.2017 20:50:59

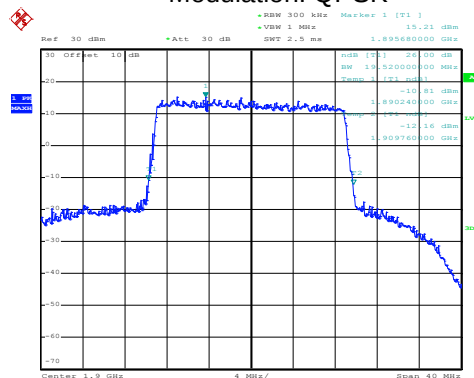
Middle channel

Modulation:16QAM



Date: 9.MAY.2017 20:51:23

Modulation: QPSK



Date: 9.MAY.2017 20:51:20

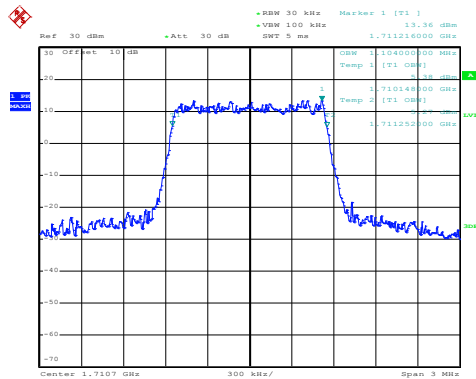
Highest channel

## LTE Band 4 part

Test Item:99% Occupy bandwidth

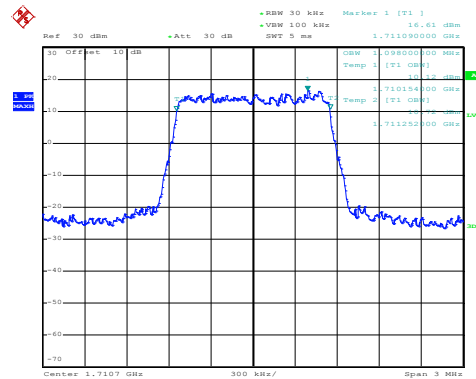
BW: 1.4MHz

Modulation:16QAM



Date: 9.MAY.2017 20:52:32

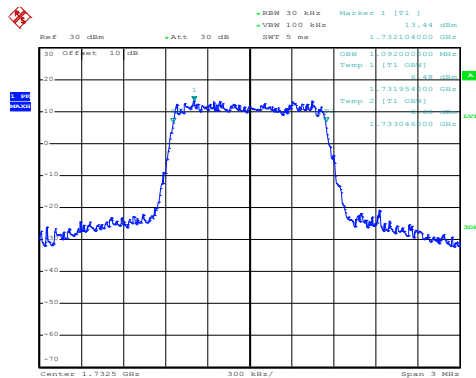
Modulation: QPSK



Date: 9.MAY.2017 20:52:27

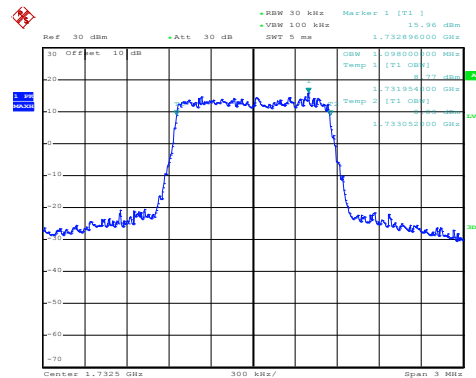
Lowest channel

Modulation:16QAM



Date: 9.MAY.2017 20:53:21

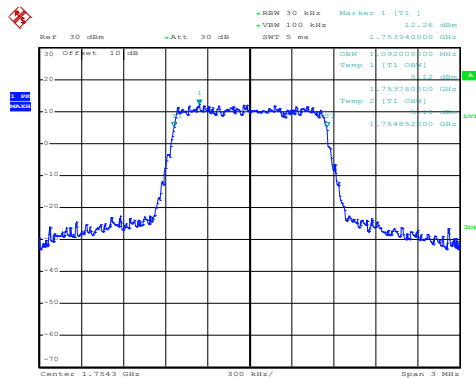
Modulation: QPSK



Date: 9.MAY.2017 20:53:14

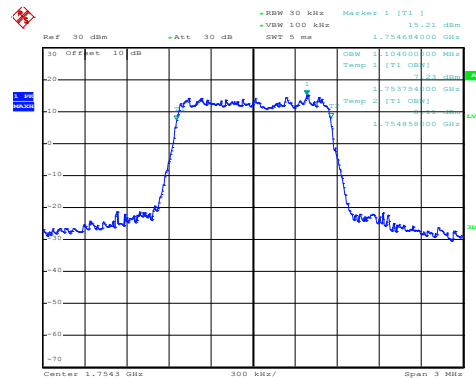
Middle channel

Modulation:16QAM



Date: 9.MAY.2017 20:53:44

Modulation: QPSK

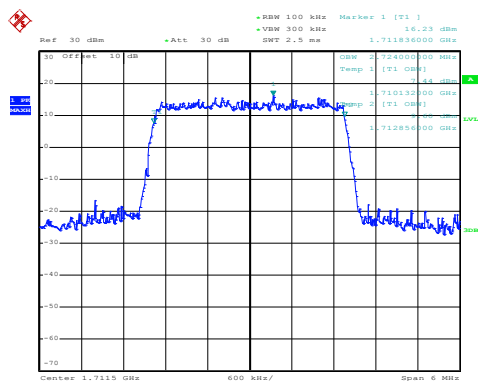


Date: 9.MAY.2017 20:53:40

## Highest channel

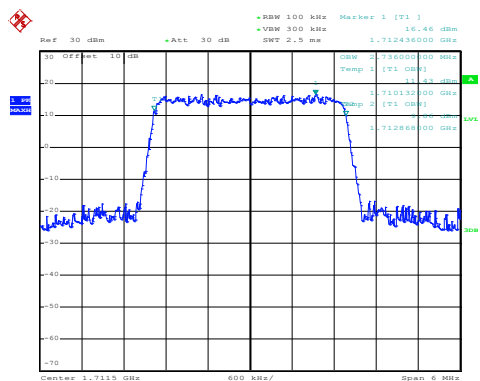
Test Item:99% Occupy bandwidth  
BW: 3MHz

Modulation:16QAM



Date: 9.MAY.2017 20:54:53

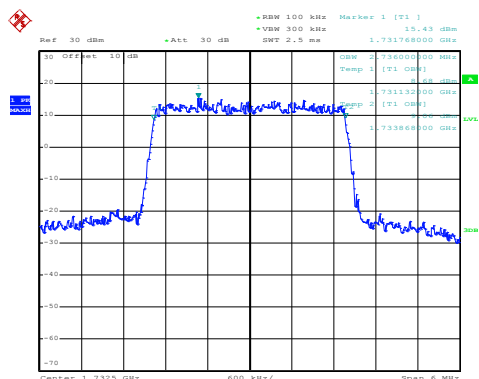
Modulation: QPSK



Date: 9.MAY.2017 20:54:48

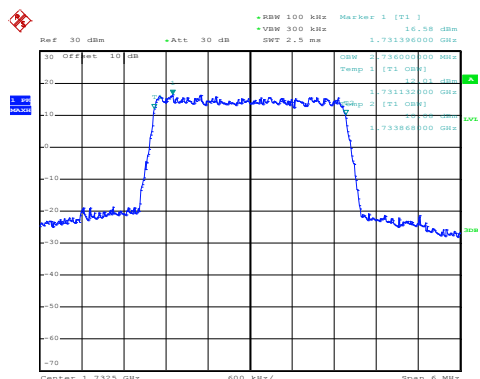
Lowest channel

Modulation:16QAM



Date: 9.MAY.2017 20:55:15

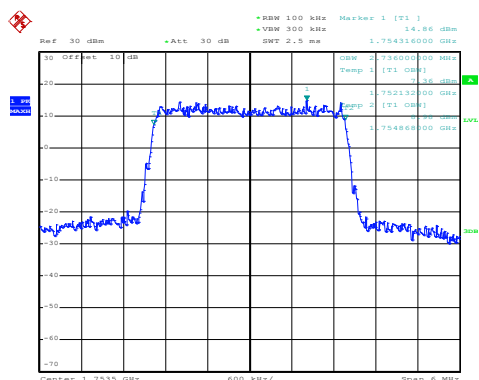
Modulation: QPSK



Date: 9.MAY.2017 20:55:11

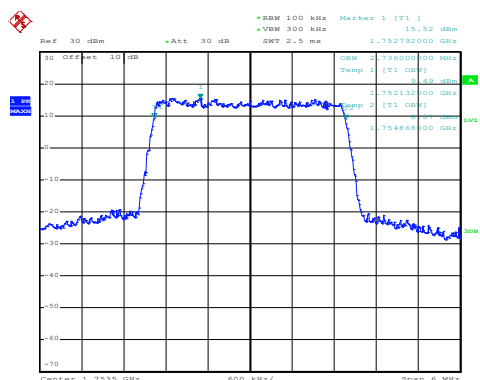
Middle channel

Modulation:16QAM



Date: 9.MAY.2017 20:56:02

Modulation: QPSK



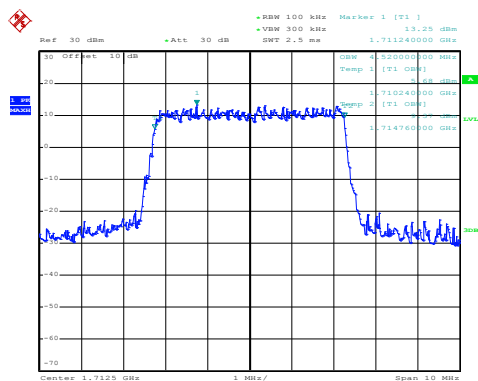
Date: 9.MAY.2017 20:55:58

Highest channel

Test Item:99% Occupy bandwidth

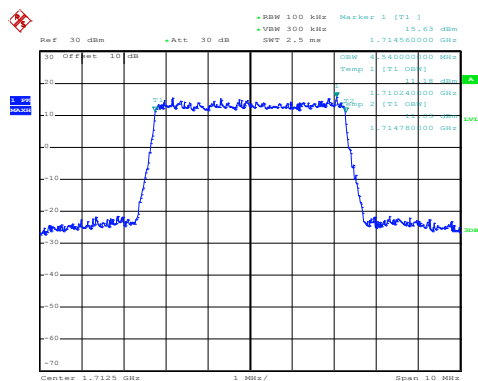
BW: 5MHz

Modulation:16QAM



Date: 9.MAY.2017 20:56:44

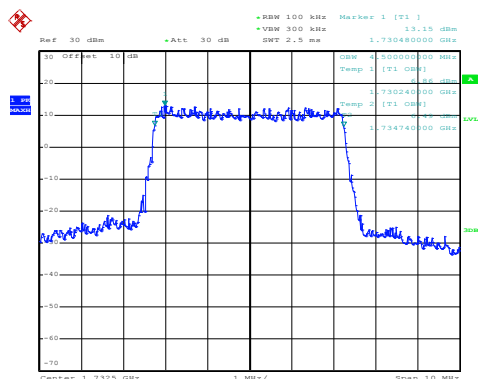
Modulation: QPSK



Date: 9.MAY.2017 20:56:40

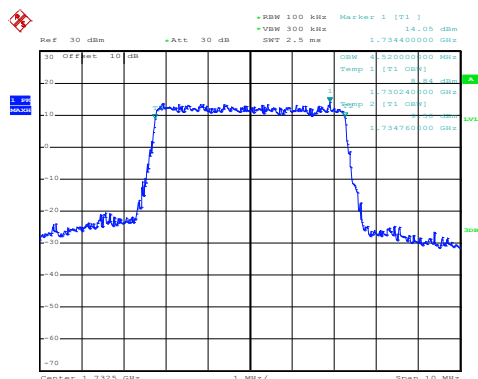
Lowest channel

Modulation:16QAM



Date: 9.MAY.2017 20:57:32

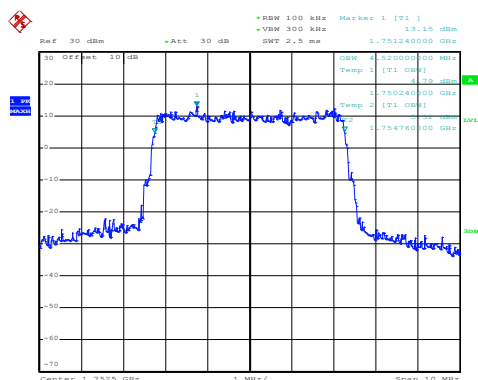
Modulation: QPSK



Date: 9.MAY.2017 20:57:27

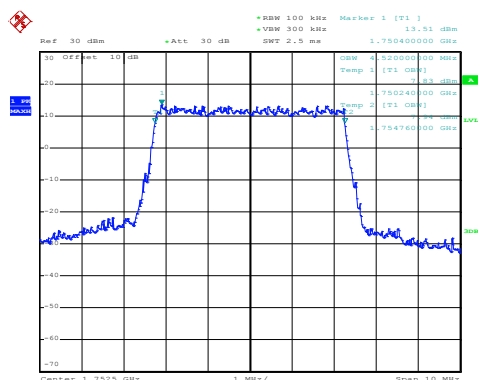
Middle channel

Modulation:16QAM



Date: 9.MAY.2017 20:57:53

Modulation: QPSK



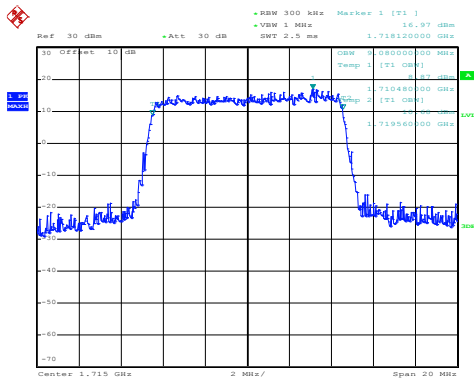
Date: 9.MAY.2017 20:57:49

Highest channel

Test Item:99% Occupy bandwidth

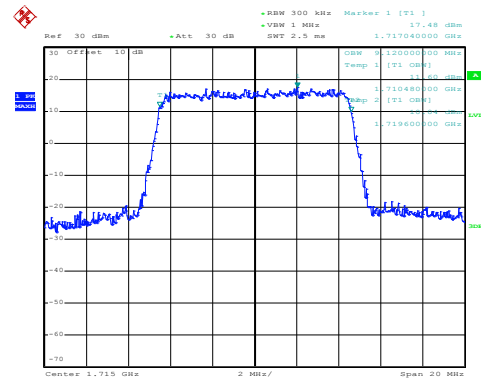
BW: 10MHz

Modulation:16QAM



Date: 9.MAY.2017 20:58:56

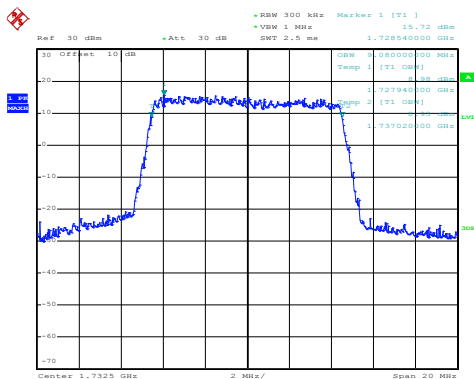
Modulation: QPSK



Date: 9.MAY.2017 20:58:51

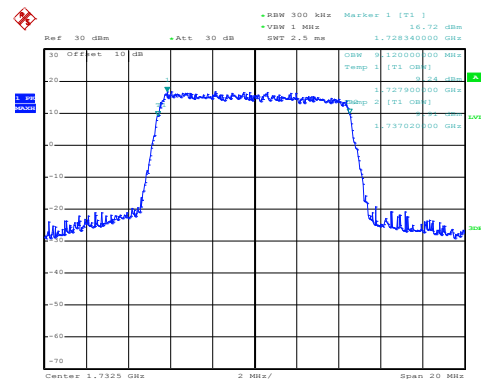
Lowest channel

Modulation:16QAM



Date: 9.MAY.2017 20:59:21

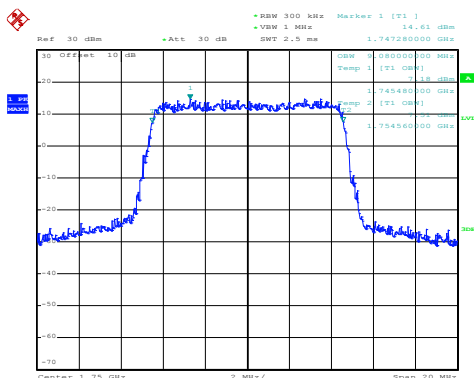
Modulation: QPSK



Date: 9.MAY.2017 20:59:15

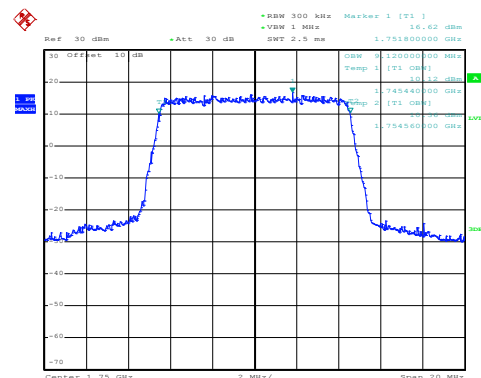
Middle channel

Modulation:16QAM



Date: 9.MAY.2017 20:59:42

Modulation: QPSK



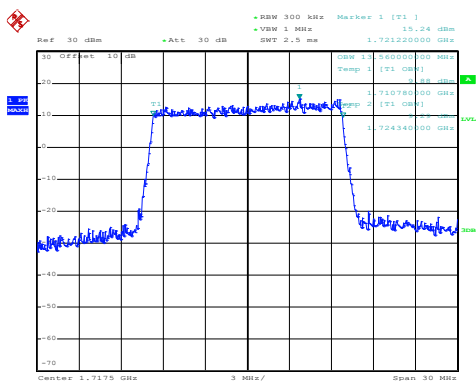
Date: 9.MAY.2017 20:59:38

Highest channel

Test Item: 99% Occupancy bandwidth

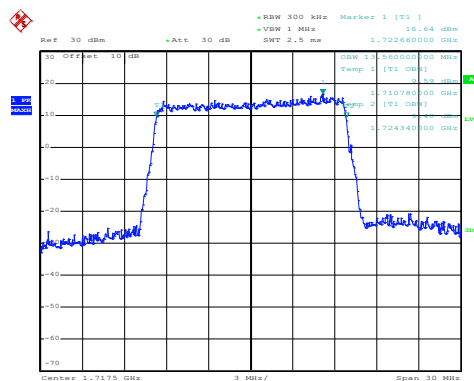
BW: 15MHz

Modulation: 16QAM



Date: 9.MAY.2017 21:01:42

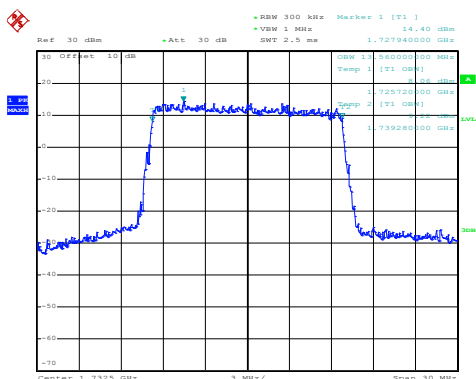
Modulation: QPSK



Date: 9.MAY.2017 21:01:36

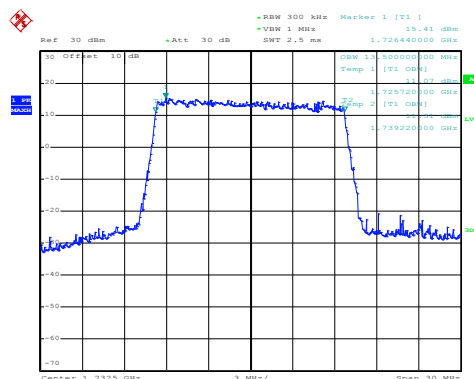
Lowest channel

Modulation: 16QAM



Date: 9.MAY.2017 21:02:07

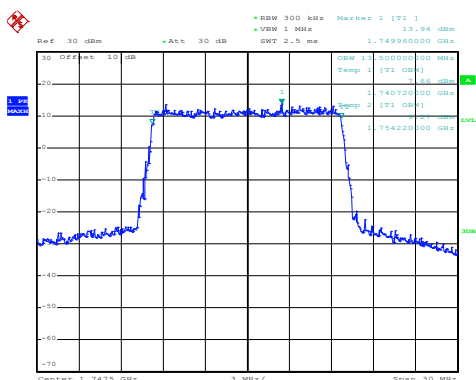
Modulation: QPSK



Date: 9.MAY.2017 21:02:02

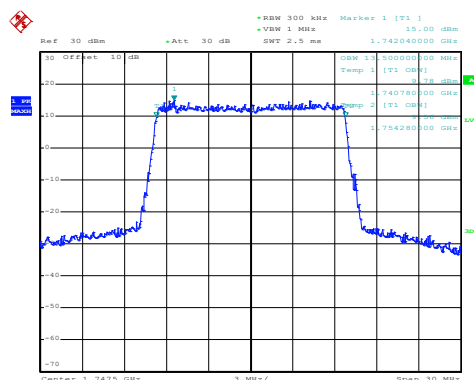
Middle channel

Modulation: 16QAM



Date: 9.MAY.2017 21:03:24

Modulation: QPSK

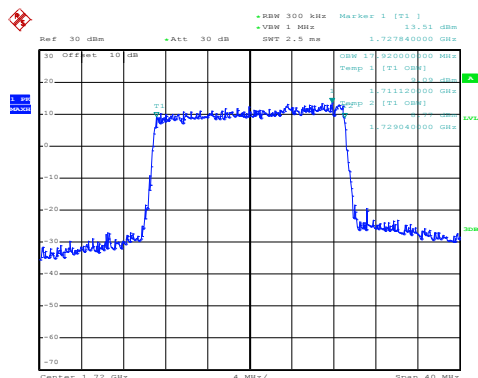


Date: 9.MAY.2017 21:03:17

Highest channel

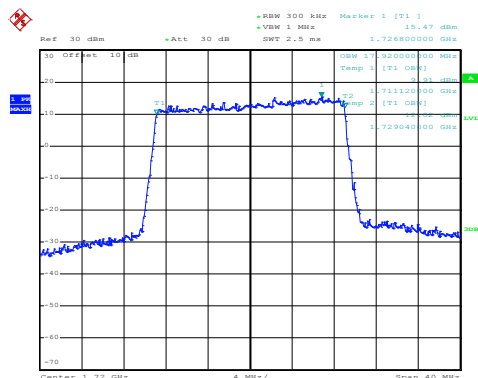
Test Item:99% Occupy bandwidth  
BW: 20MHz

Modulation:16QAM



Date: 9.MAY.2017 21:05:45

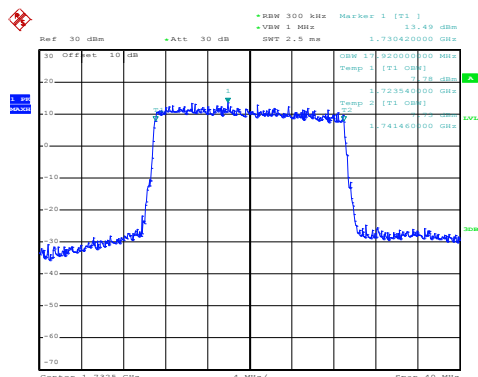
Modulation: QPSK



Date: 9.MAY.2017 21:05:40

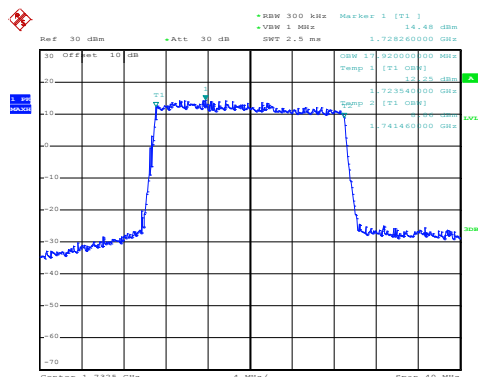
Lowest channel

Modulation:16QAM



Date: 9.MAY.2017 21:06:34

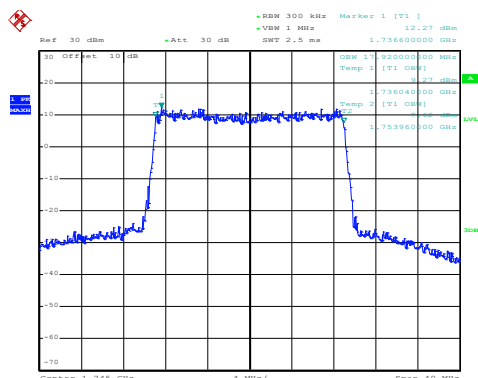
Modulation: QPSK



Date: 9.MAY.2017 21:06:29

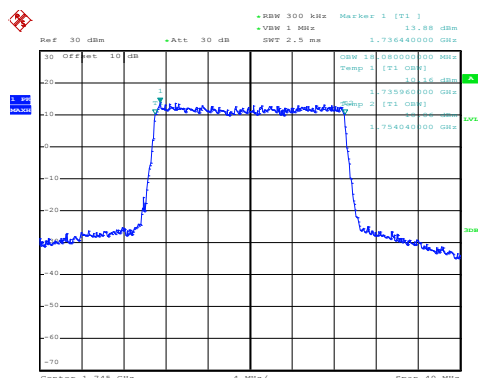
Middle channel

Modulation:16QAM



Date: 9.MAY.2017 21:06:57

Modulation: QPSK



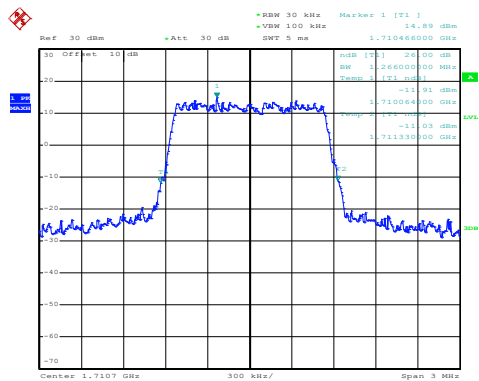
Date: 9.MAY.2017 21:06:53

Highest channel

Test Item:-26dBc bandwidth

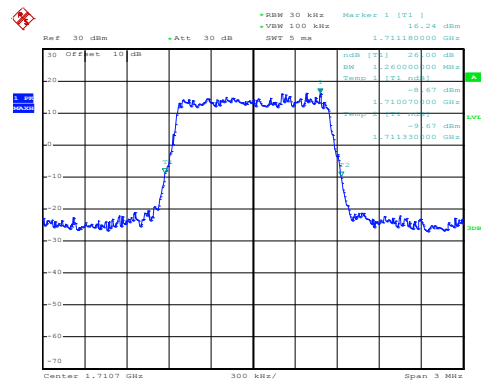
BW: 1.4MHz

Modulation:16QAM



Date: 9.MAY.2017 20:52:45

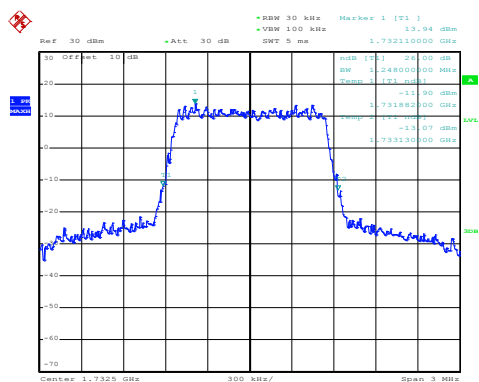
Modulation: QPSK



Date: 9.MAY.2017 20:52:39

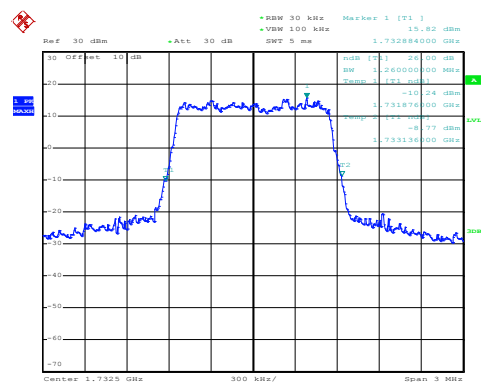
Lowest channel

Modulation:16QAM



Date: 9.MAY.2017 20:53:06

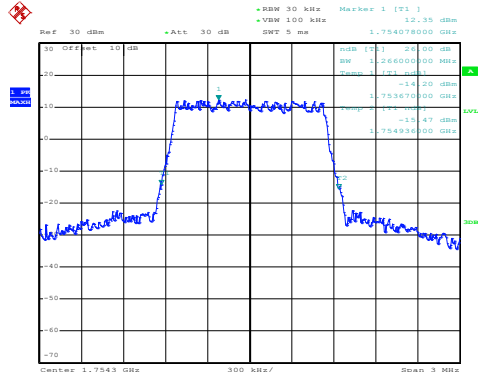
Modulation: QPSK



Date: 9.MAY.2017 20:53:02

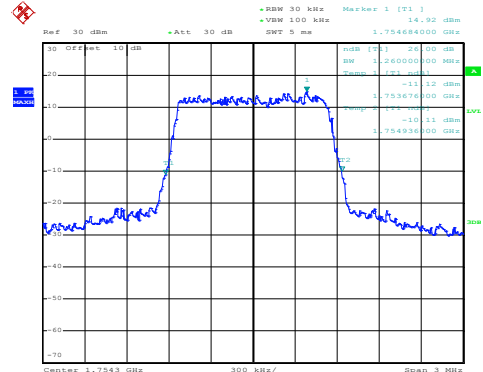
Middle channel

Modulation:16QAM



Date: 9.MAY.2017 20:53:55

Modulation: QPSK



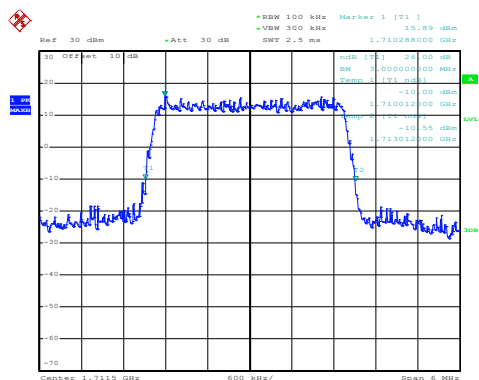
Date: 9.MAY.2017 20:53:51

Highest channel

Test Item:-26dBc bandwidth

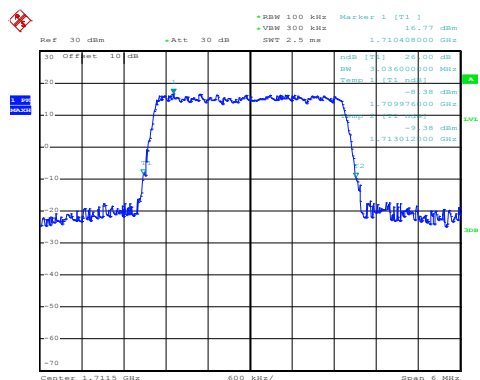
BW: 3MHz

Modulation:16QAM



Date: 9.MAY.2017 20:54:41

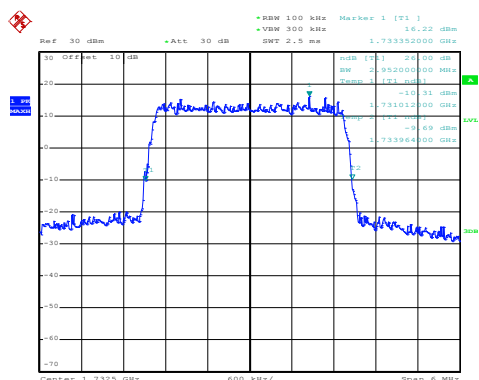
Modulation: QPSK



Date: 9.MAY.2017 20:54:37

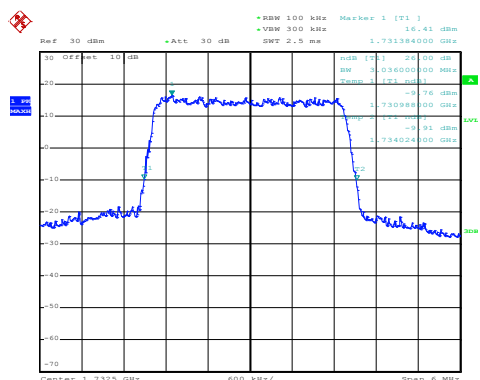
Lowest channel

Modulation:16QAM



Date: 9.MAY.2017 20:55:27

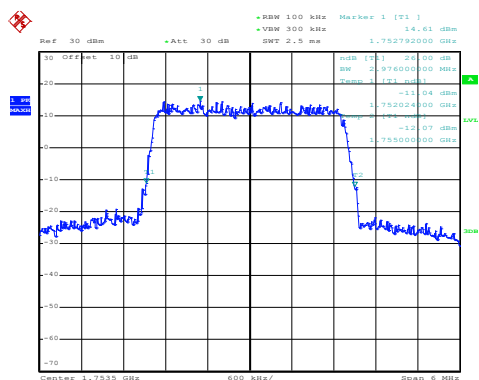
Modulation: QPSK



Date: 9.MAY.2017 20:55:23

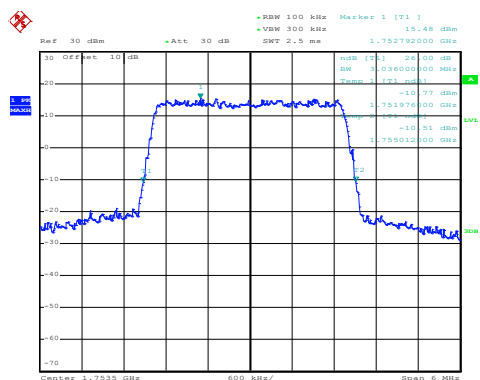
Middle channel

Modulation:16QAM



Date: 9.MAY.2017 20:55:47

Modulation: QPSK



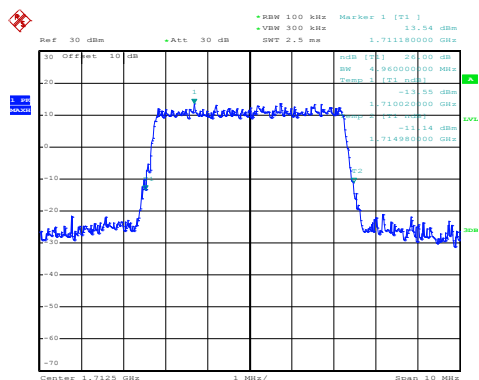
Date: 9.MAY.2017 20:55:43

Highest channel

Test Item:-26dBc bandwidth

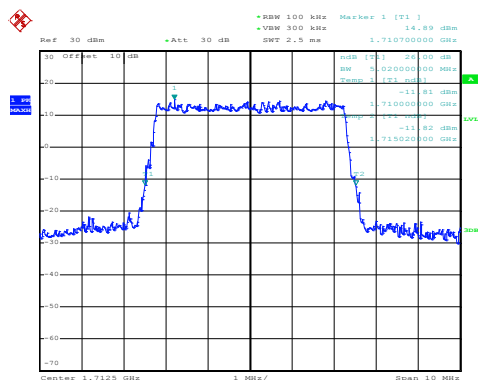
BW: 5MHz

Modulation:16QAM



Date: 9.MAY.2017 20:56:56

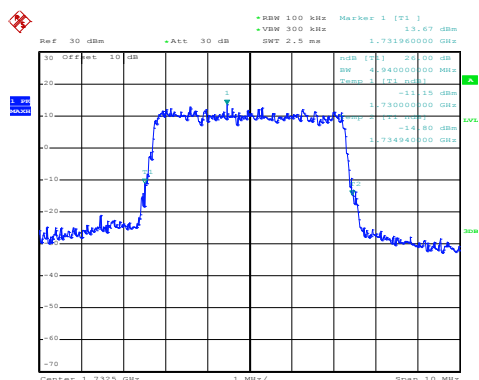
Modulation: QPSK



Date: 9.MAY.2017 20:56:51

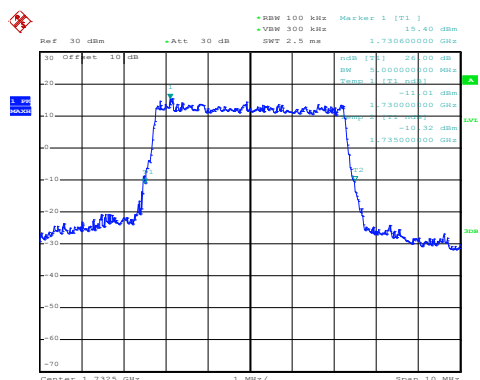
Lowest channel

Modulation:16QAM



Date: 9.MAY.2017 20:57:18

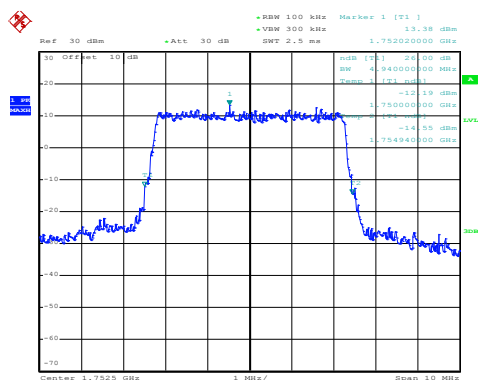
Modulation: QPSK



Date: 9.MAY.2017 20:57:14

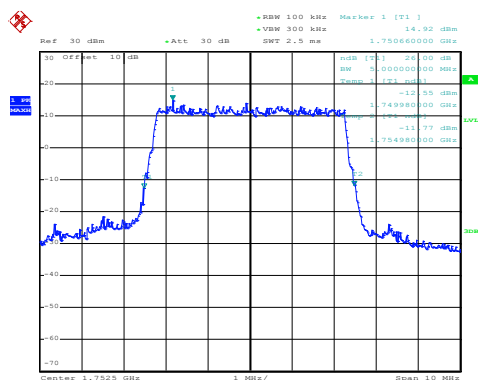
Middle channel

Modulation:16QAM



Date: 9.MAY.2017 20:58:05

Modulation: QPSK

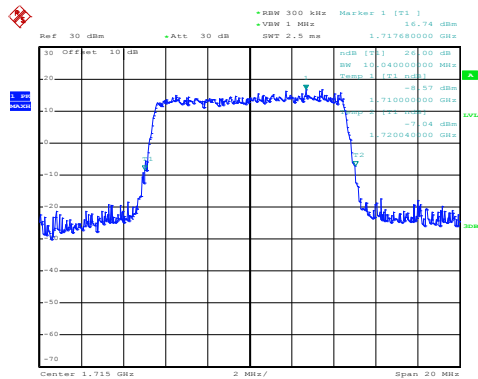


Date: 9.MAY.2017 20:58:01

Highest channel

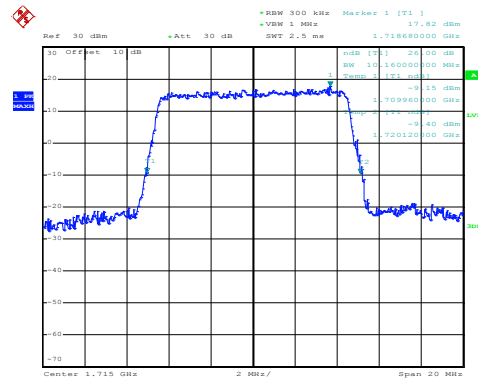
Test Item:-26dBc bandwidth  
BW: 10MHz

Modulation:16QAM



Date: 9.MAY.2017 20:58:43

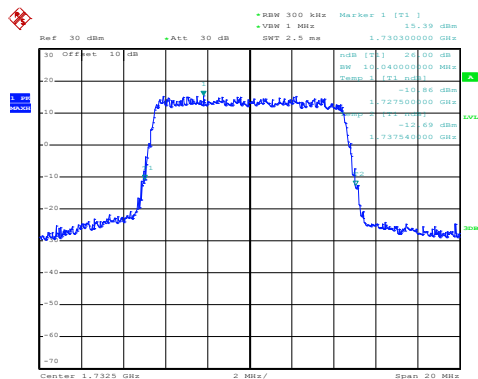
Modulation: QPSK



Date: 9.MAY.2017 20:58:38

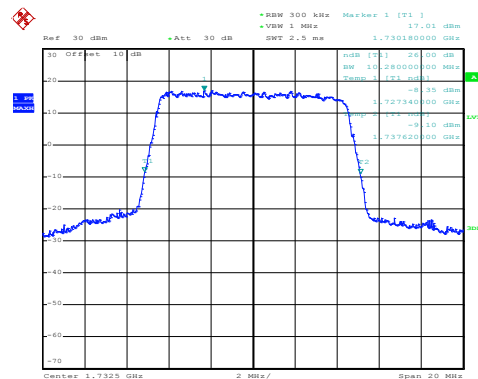
Lowest channel

Modulation:16QAM



Date: 9.MAY.2017 21:41:28

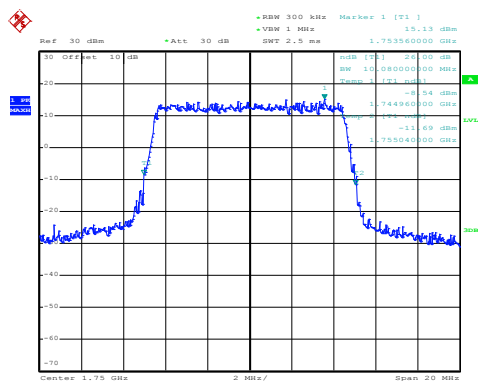
Modulation: QPSK



Date: 9.MAY.2017 21:41:23

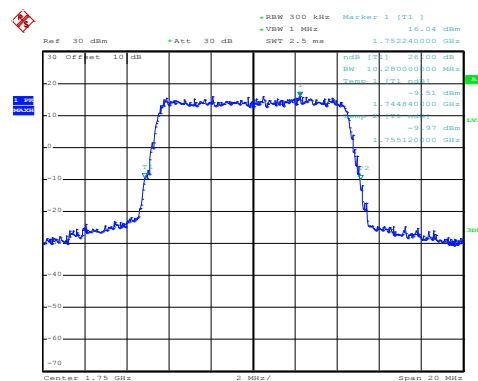
Middle channel

Modulation:16QAM



Date: 9.MAY.2017 20:59:53

Modulation: QPSK



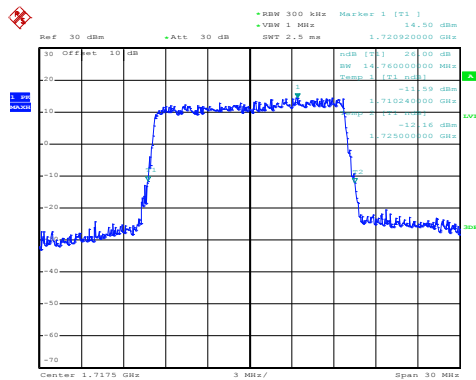
Date: 9.MAY.2017 20:59:49

Highest channel

Test Item:-26dBc bandwidth

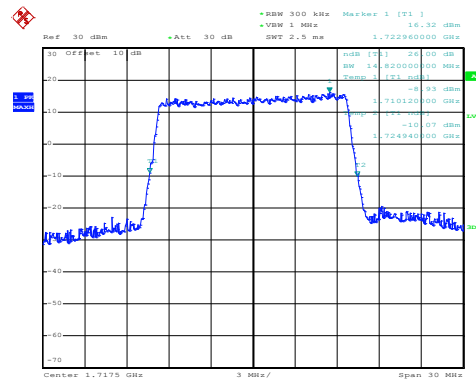
BW: 15MHz

Modulation:16QAM



Date: 9.MAY.2017 21:01:28

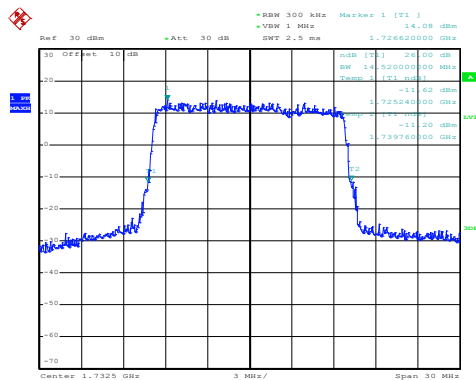
Modulation: QPSK



Date: 9.MAY.2017 21:01:24

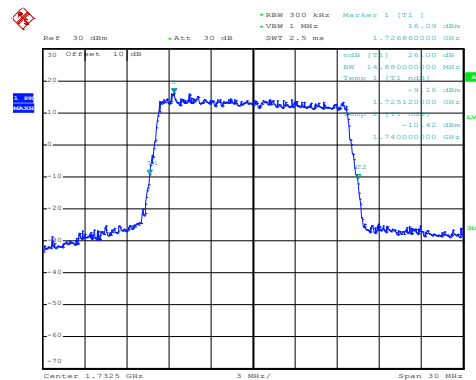
Lowest channel

Modulation:16QAM



Date: 9.MAY.2017 21:02:25

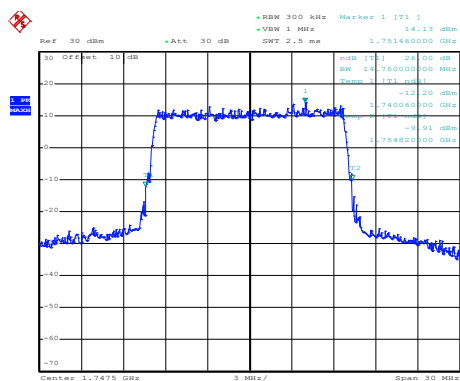
Modulation: QPSK



Date: 9.MAY.2017 21:02:21

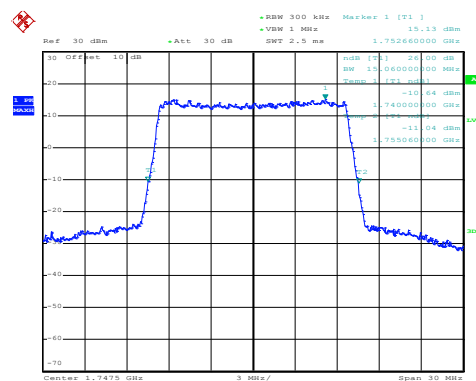
Middle channel

Modulation:16QAM



Date: 9.MAY.2017 21:03:09

Modulation: QPSK



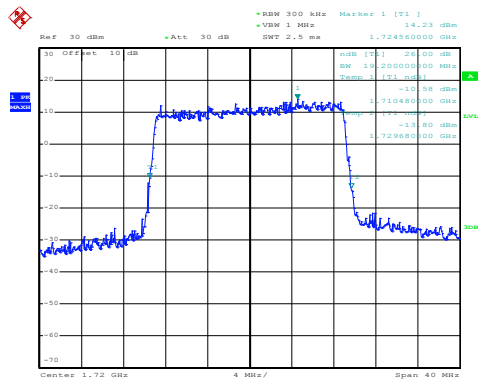
Date: 9.MAY.2017 21:03:05

Highest channel

Test Item:-26dBc bandwidth

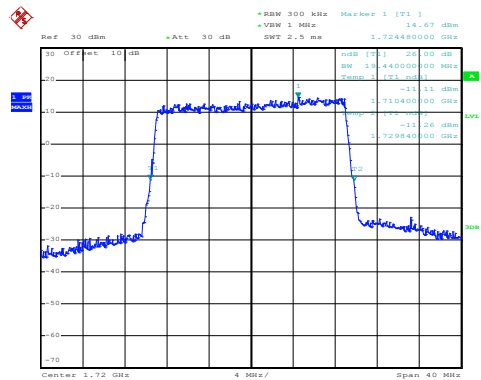
BW: 20MHz

Modulation:16QAM



Date: 9.MAY.2017 21:05:57

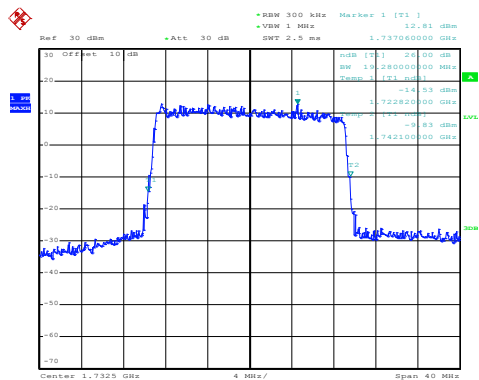
Modulation: QPSK



Date: 9.MAY.2017 21:05:52

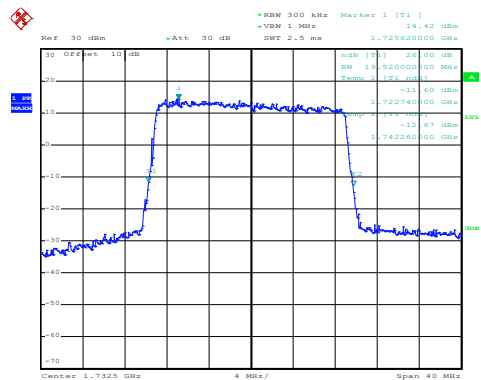
Lowest channel

Modulation:16QAM



Date: 9.MAY.2017 21:06:21

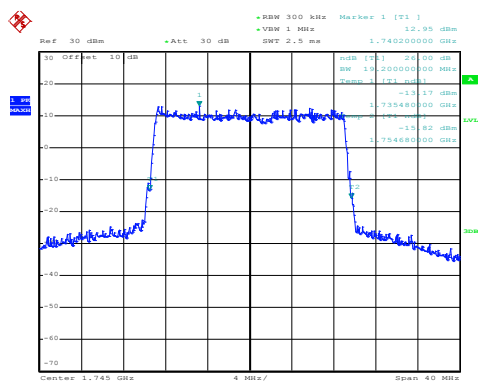
Modulation: QPSK



Date: 9.MAY.2017 21:06:17

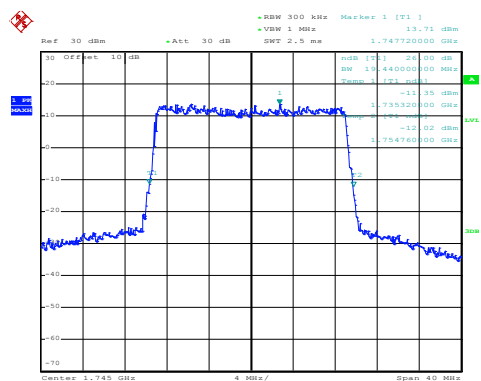
Middle channel

Modulation:16QAM



Date: 9.MAY.2017 21:07:10

Modulation: QPSK



Date: 9.MAY.2017 21:07:05

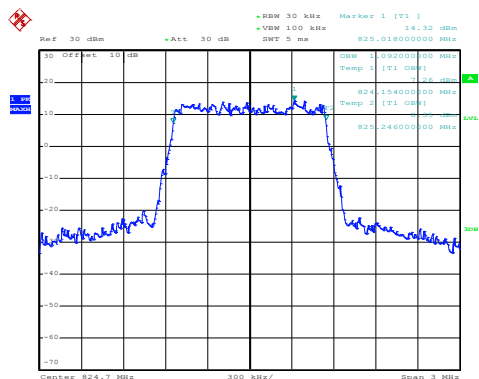
Highest channel

## LTE-Band 5 part

Test Item:99% Occupy bandwidth

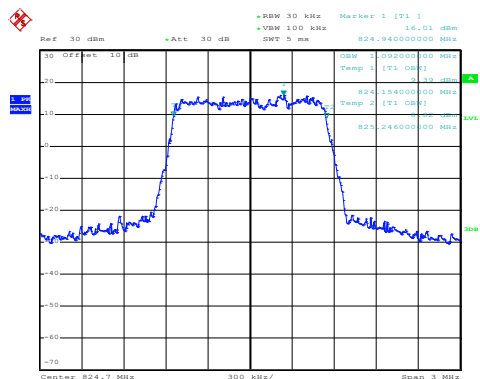
BW: 1.4MHz

Modulation:16QAM



Date: 9.MAY.2017 21:20:56

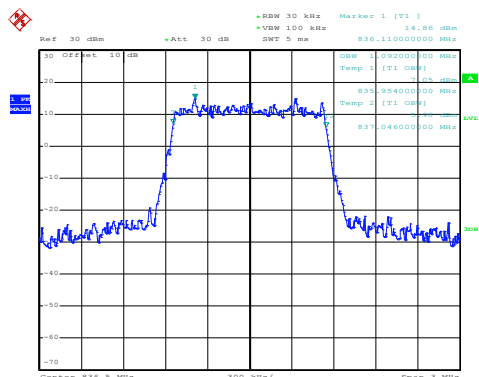
Modulation: QPSK



Date: 9.MAY.2017 21:20:52

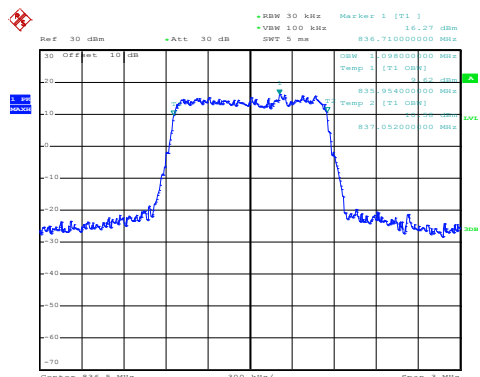
## Lowest channel

Modulation:16QAM



Date: 9.MAY.2017 21:21:21

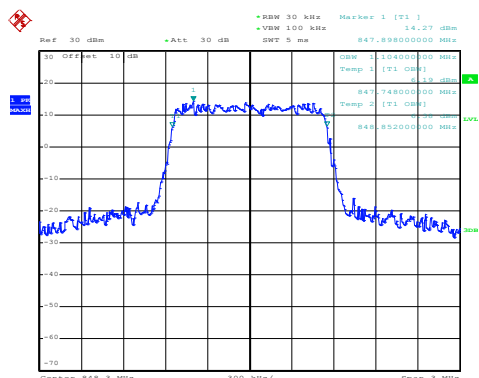
Modulation: QPSK



Date: 9.MAY.2017 21:21:16

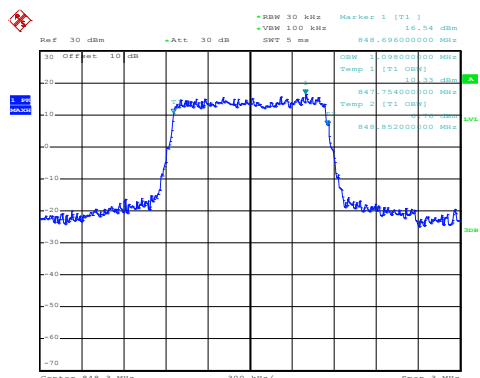
## Middle channel

Modulation:16QAM



Date: 9.MAY.2017 21:22:12

Modulation: QPSK



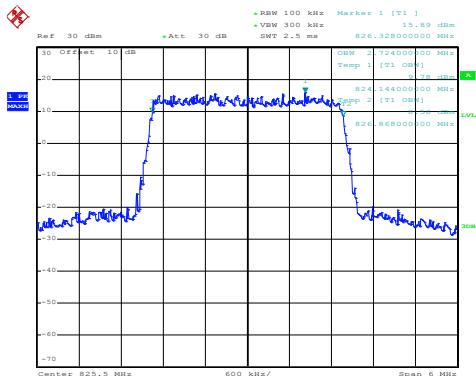
Date: 9.MAY.2017 21:22:07

## Highest channel

Test Item: 99% Occupancy bandwidth

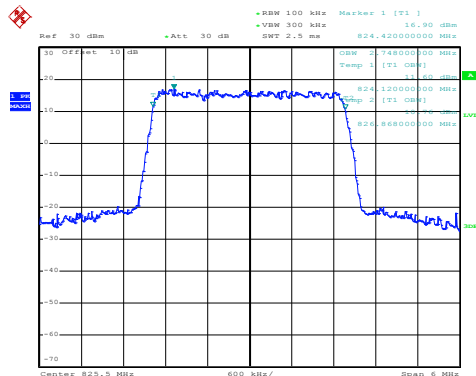
BW: 3MHz

Modulation: 16QAM



Date: 9.MAY.2017 21:22:52

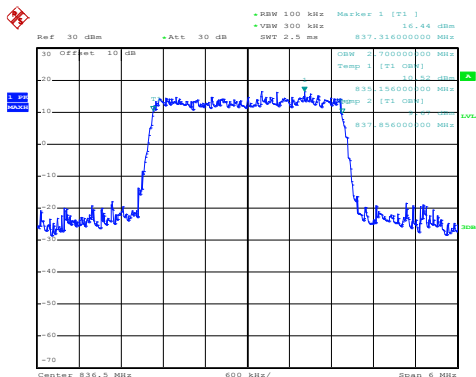
Modulation: QPSK



Date: 9.MAY.2017 21:22:47

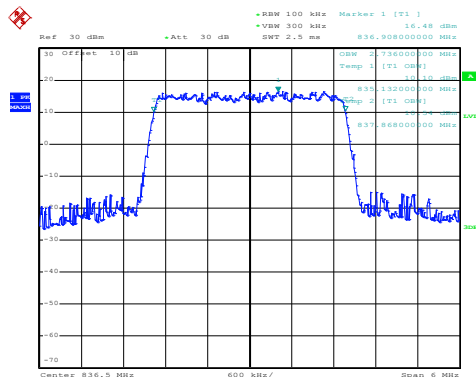
Lowest channel

Modulation: 16QAM



Date: 9.MAY.2017 21:23:41

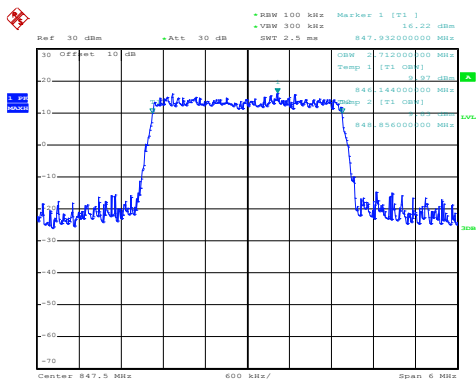
Modulation: QPSK



Date: 9.MAY.2017 21:23:37

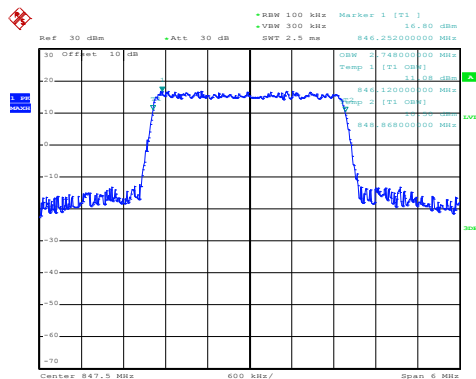
Middle channel

Modulation: 16QAM



Date: 9.MAY.2017 21:24:13

Modulation: QPSK



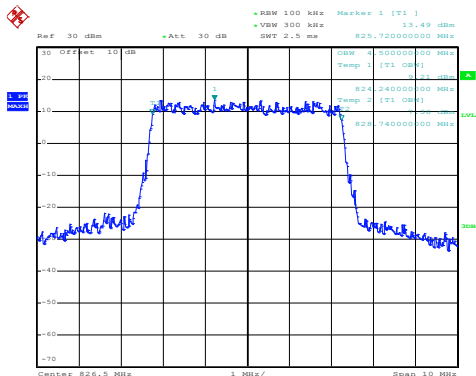
Date: 9.MAY.2017 21:24:08

Highest channel

Test Item:99% Occupancy bandwidth

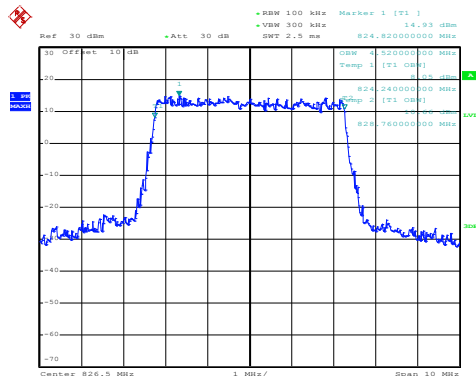
BW: 5MHz

Modulation:16QAM



Date: 9.MAY.2017 21:25:21

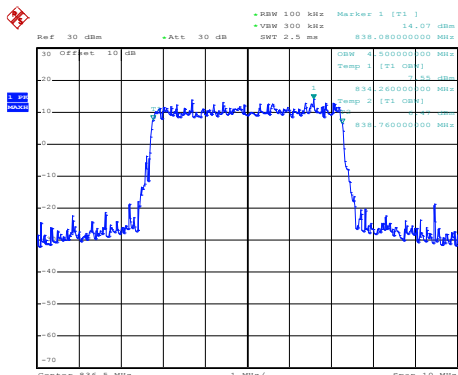
Modulation: QPSK



Date: 9.MAY.2017 21:25:16

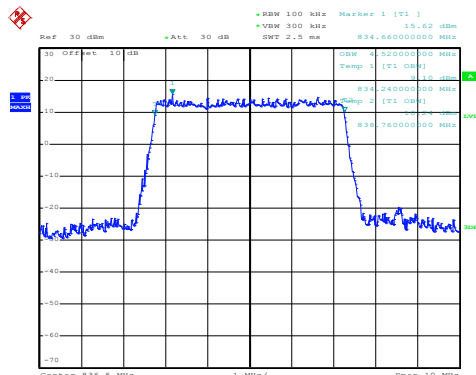
Lowest channel

Modulation:16QAM



Date: 9.MAY.2017 21:26:07

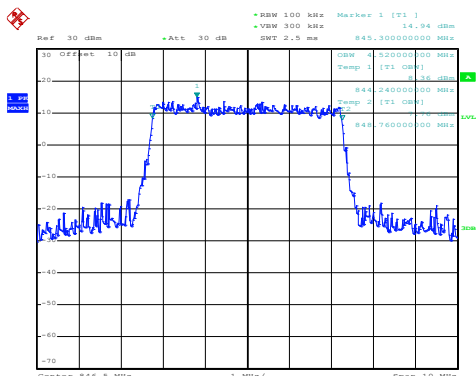
Modulation: QPSK



Date: 9.MAY.2017 21:26:03

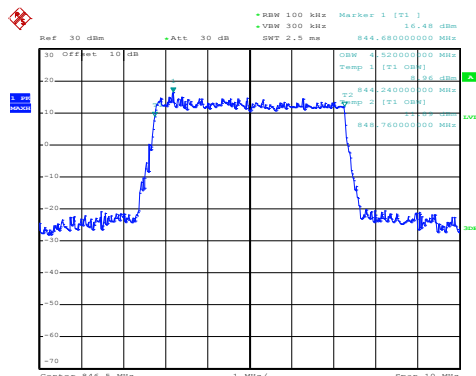
Middle channel

Modulation:16QAM



Date: 9.MAY.2017 21:27:00

Modulation: QPSK



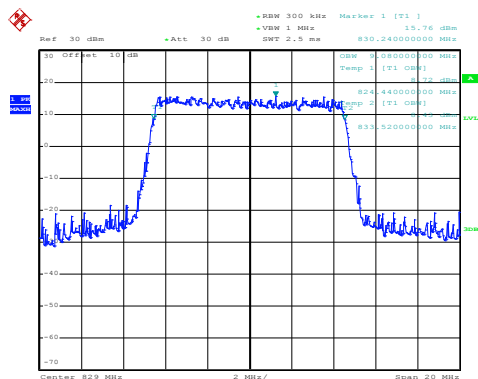
Date: 9.MAY.2017 21:26:55

Highest channel

Test Item:99% Occupy bandwidth

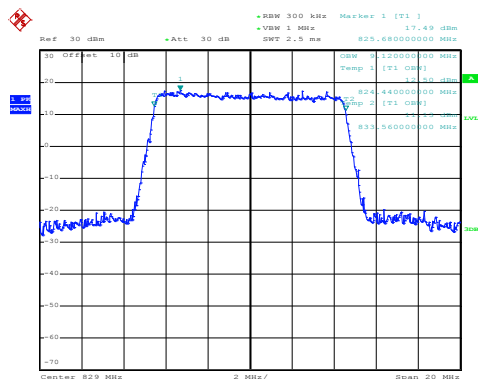
BW: 10MHz

Modulation:16QAM



Date: 9.MAY.2017 21:27:42

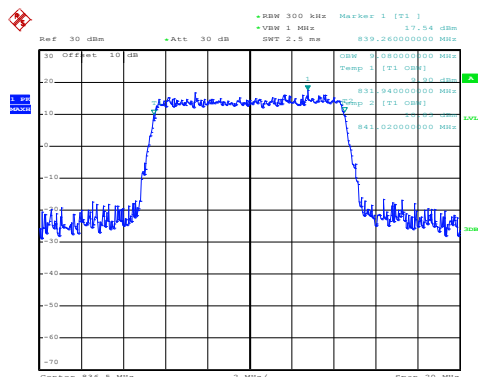
Modulation: QPSK



Date: 9.MAY.2017 21:27:38

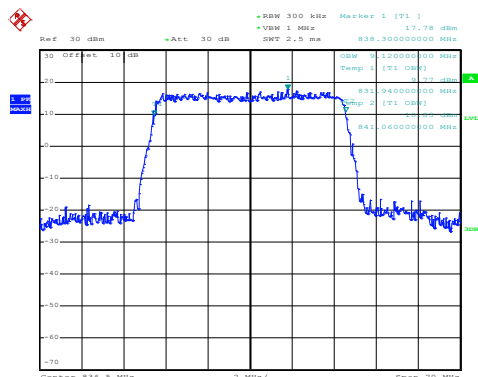
Lowest channel

Modulation:16QAM



Date: 9.MAY.2017 21:28:32

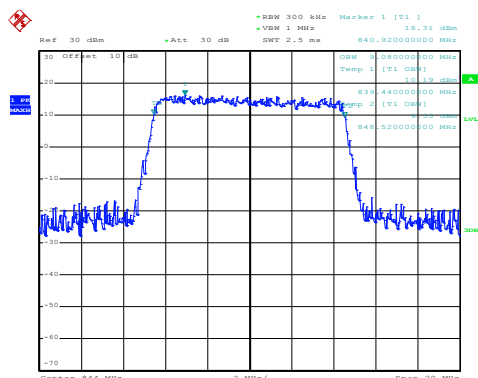
Modulation: QPSK



Date: 9.MAY.2017 21:28:27

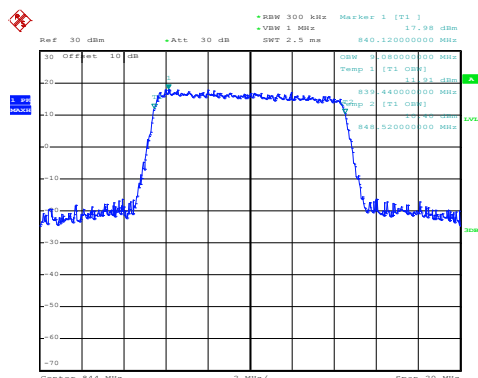
Middle channel

Modulation:16QAM



Date: 9.MAY.2017 21:28:58

Modulation: QPSK



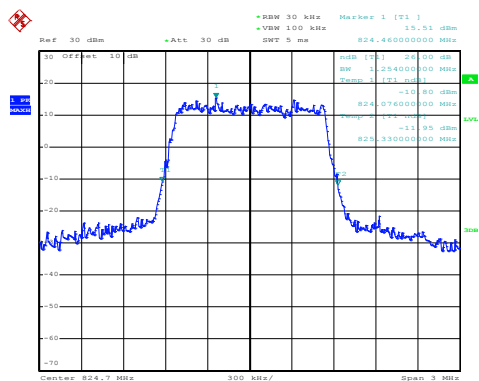
Date: 9.MAY.2017 21:28:52

Highest channel

Test Item:-26dBc bandwidth

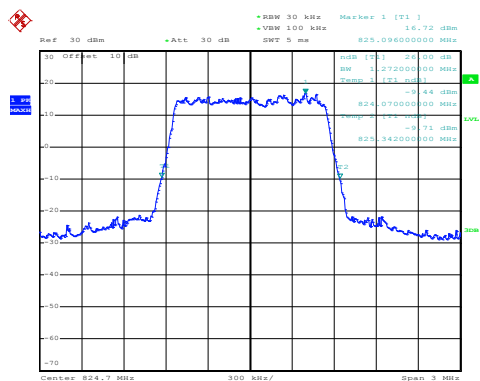
BW: 1.4MHz

Modulation:16QAM



Date: 9.MAY.2017 21:20:44

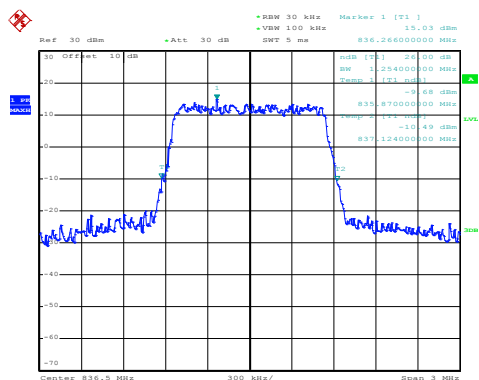
Modulation: QPSK



Date: 9.MAY.2017 21:20:38

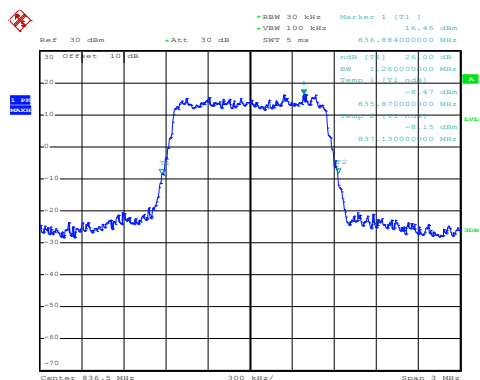
Lowest channel

Modulation:16QAM



Date: 9.MAY.2017 21:21:34

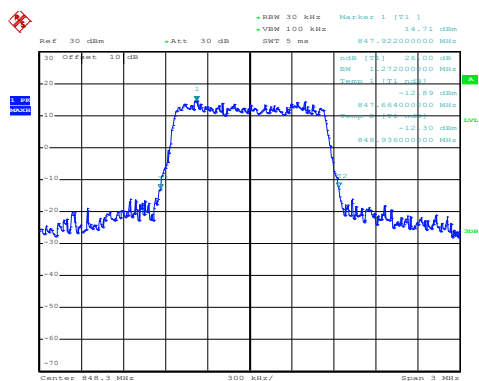
Modulation: QPSK



Date: 9.MAY.2017 21:21:29

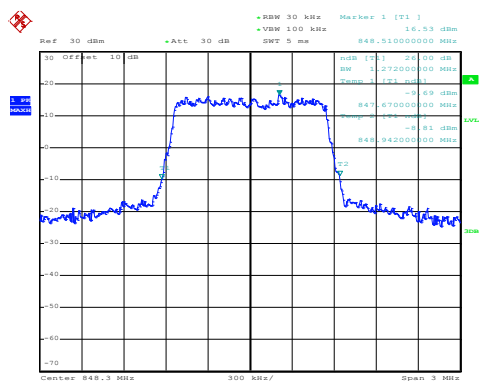
Middle channel

Modulation:16QAM



Date: 9.MAY.2017 21:22:00

Modulation: QPSK

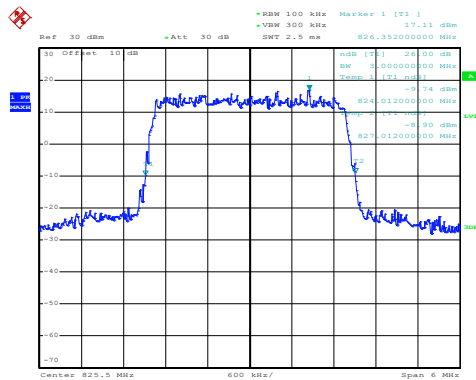


Date: 9.MAY.2017 21:21:55

Highest channel

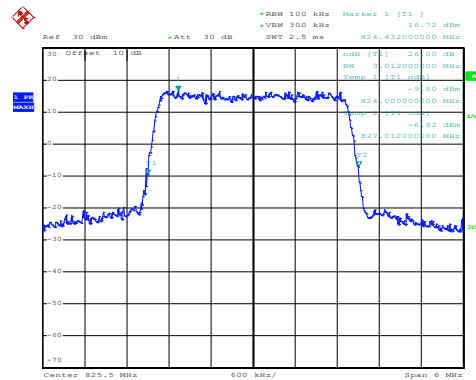
Test Item:-26dBc bandwidth  
BW: 3MHz

Modulation:16QAM



Date: 9.MAY.2017 21:23:04

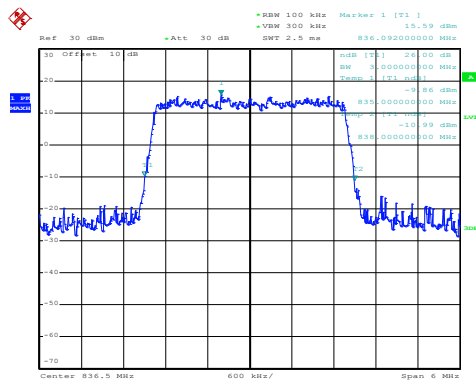
Modulation: QPSK



Date: 9.MAY.2017 21:22:59

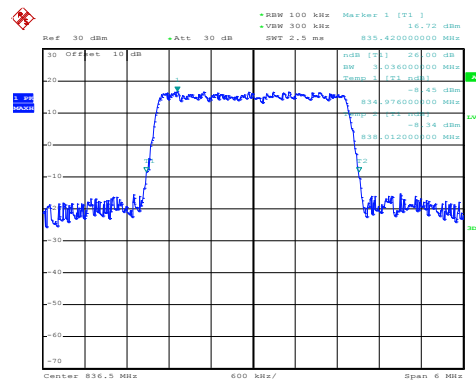
Lowest channel

Modulation:16QAM



Date: 9.MAY.2017 21:23:29

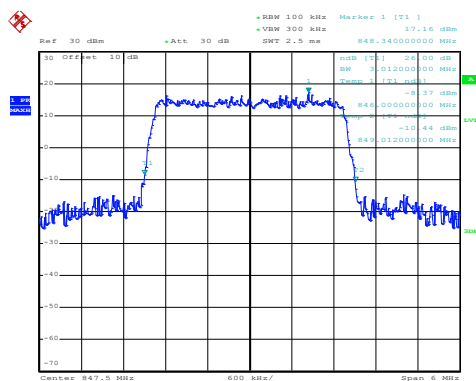
Modulation: QPSK



Date: 9.MAY.2017 21:23:25

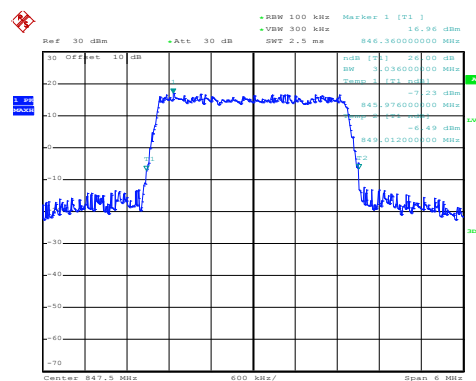
Middle channel

Modulation:16QAM



Date: 9.MAY.2017 21:24:26

Modulation: QPSK



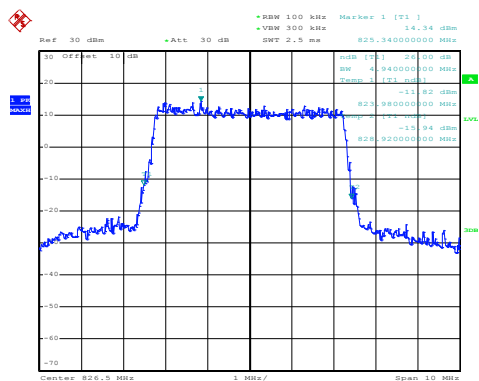
Date: 9.MAY.2017 21:24:20

Highest channel

Test Item:-26dBc bandwidth

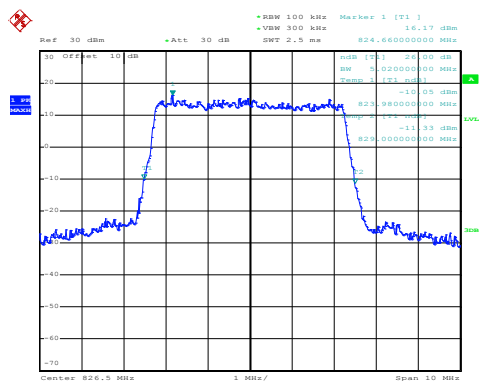
BW: 5MHz

Modulation:16QAM



Date: 9.MAY.2017 21:25:08

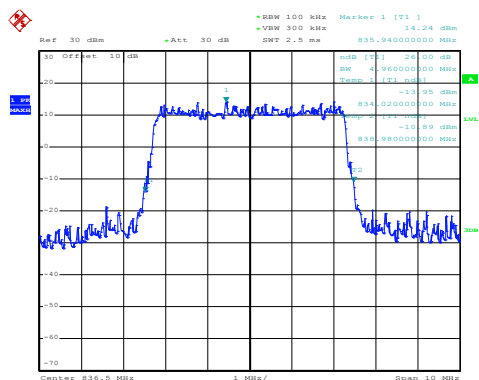
Modulation: QPSK



Date: 9.MAY.2017 21:25:03

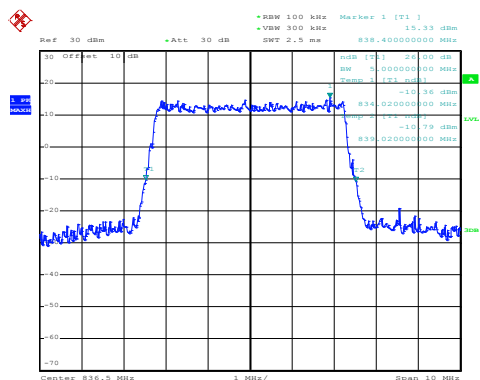
Lowest channel

Modulation:16QAM



Date: 9.MAY.2017 21:26:20

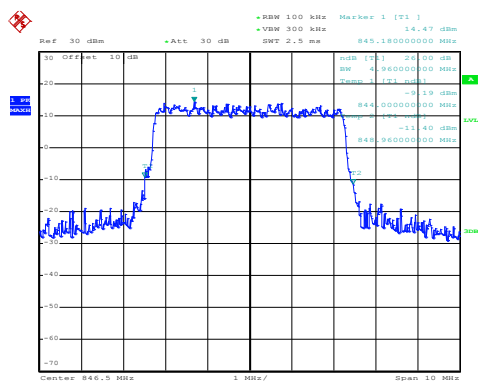
Modulation: QPSK



Date: 9.MAY.2017 21:26:15

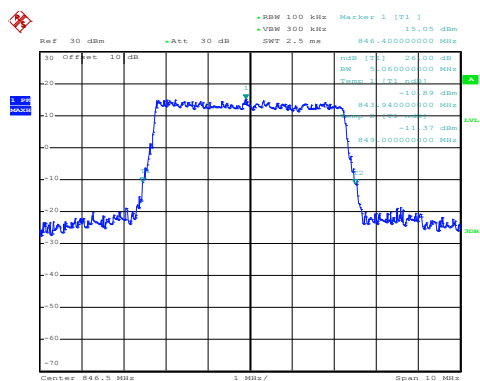
Middle channel

Modulation:16QAM



Date: 9.MAY.2017 21:26:47

Modulation: QPSK



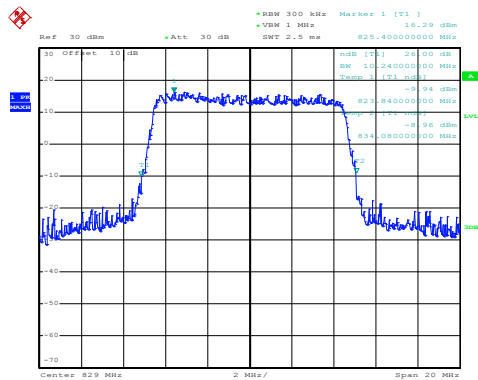
Date: 9.MAY.2017 21:26:41

Highest channel

Test Item:-26dBc bandwidth

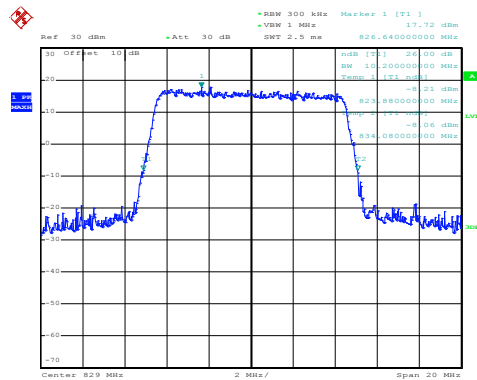
BW: 10MHz

Modulation:16QAM



Date: 9.MAY.2017 21:27:54

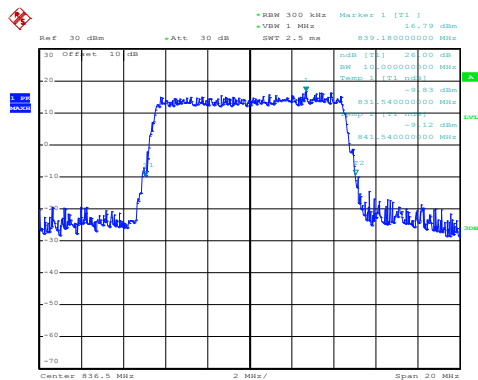
Modulation: QPSK



Date: 9.MAY.2017 21:27:49

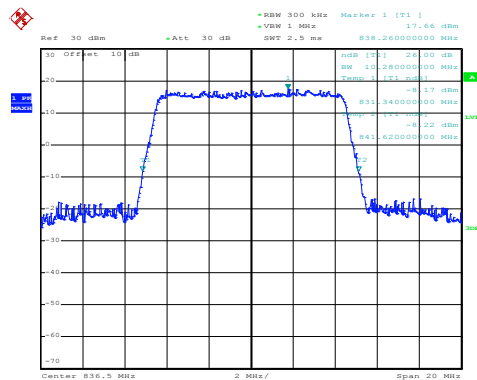
Lowest channel

Modulation:16QAM



Date: 9.MAY.2017 21:28:17

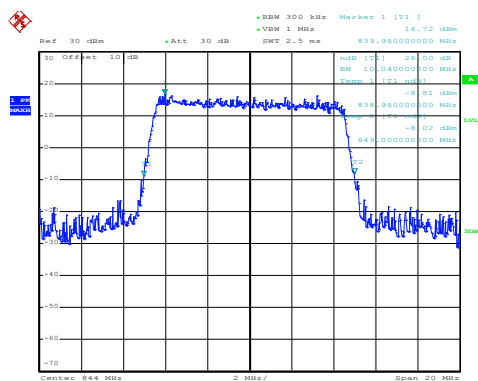
Modulation: QPSK



Date: 9.MAY.2017 21:28:12

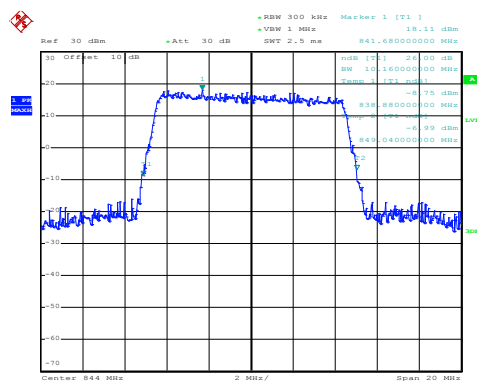
Middle channel

Modulation:16QAM



Date: 9.MAY.2017 21:29:11

Modulation: QPSK



Date: 9.MAY.2017 21:29:06

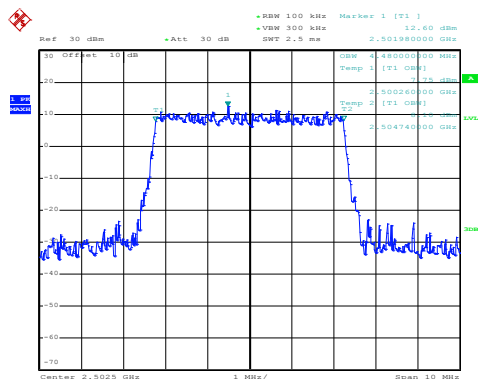
Highest channel

## LTE-Band 7 part

Test Item:99% Occupancy bandwidth

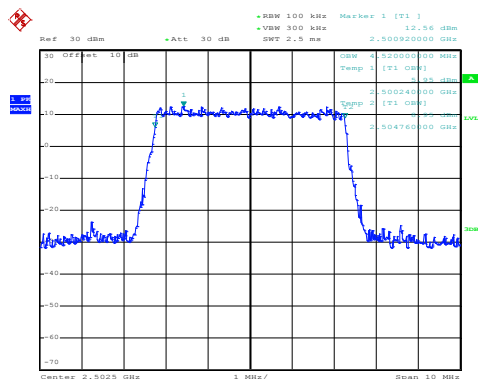
BW: 5MHz

Modulation:16QAM



Date: 9.MAY.2017 21:08:11

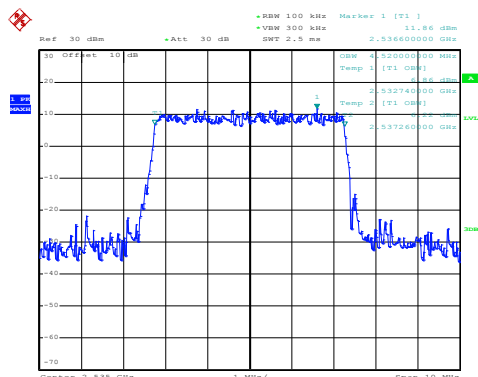
Modulation:QPSK



Date: 9.MAY.2017 21:08:07

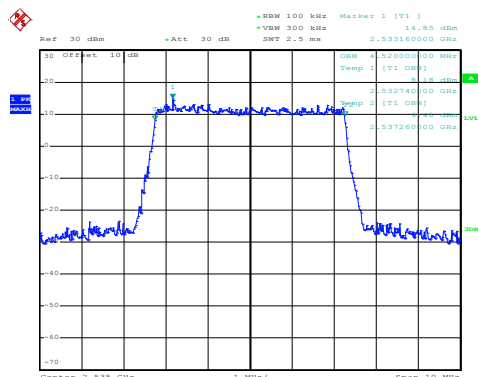
Lowest channel

Modulation:16QAM



Date: 9.MAY.2017 21:08:34

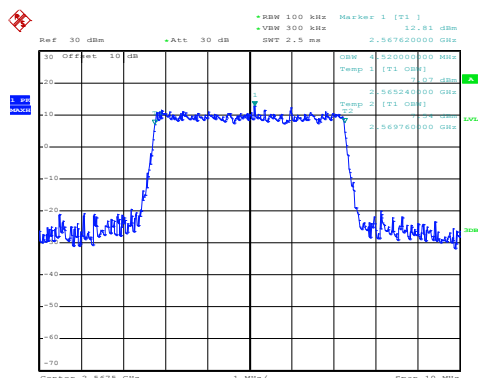
Modulation:QPSK



Date: 9.MAY.2017 21:08:30

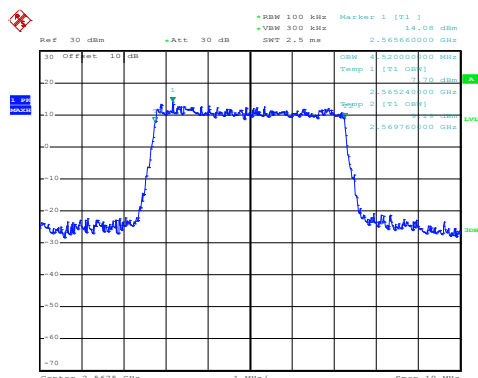
Middle channel

Modulation:16QAM



Date: 9.MAY.2017 21:09:25

Modulation: QPSK

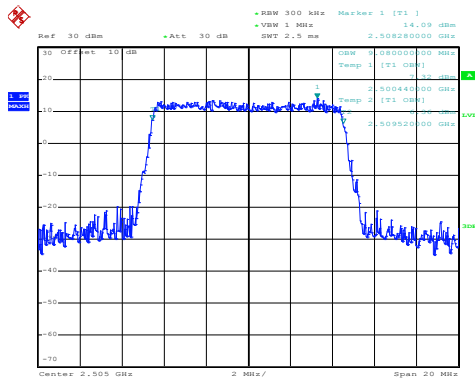


Date: 9.MAY.2017 21:09:21

Highest channel

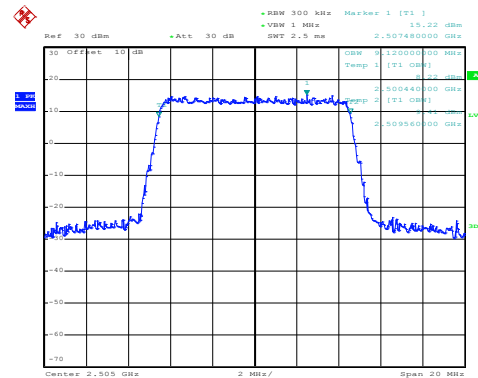
Test Item: 99% Occupancy bandwidth  
BW: 10MHz

Modulation: 16QAM



Date: 9.MAY.2017 21:10:04

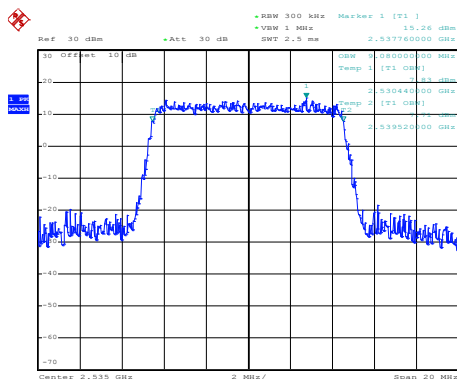
Modulation: QPSK



Date: 9.MAY.2017 21:09:59

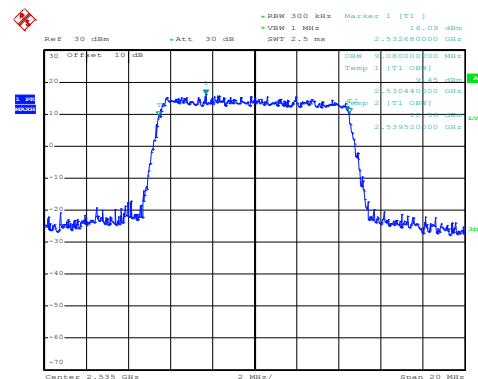
Lowest channel

Modulation: 16QAM



Date: 9.MAY.2017 21:10:51

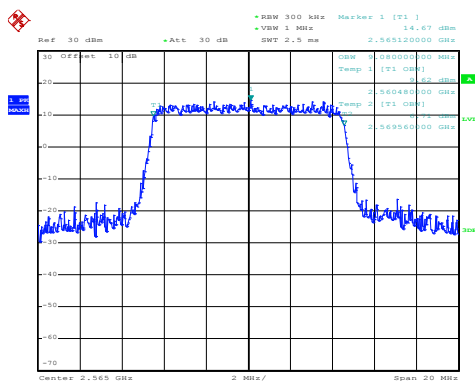
Modulation: QPSK



Date: 9.MAY.2017 21:10:47

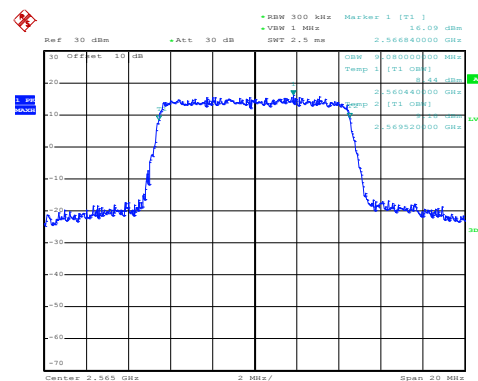
Middle channel

Modulation: 16QAM



Date: 9.MAY.2017 21:11:12

Modulation: QPSK



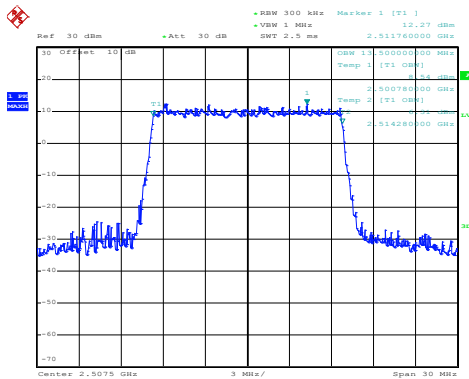
Date: 9.MAY.2017 21:11:08

Highest channel

Test Item:99% Occupy bandwidth

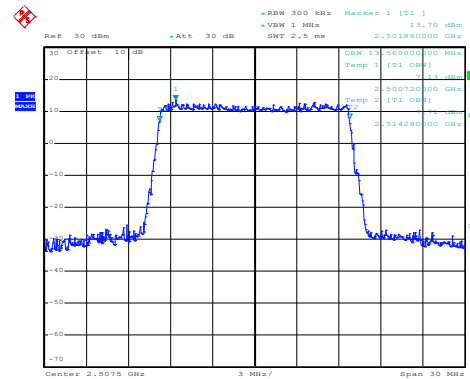
BW: 15MHz

Modulation:16QAM



Date: 9.MAY.2017 21:12:46

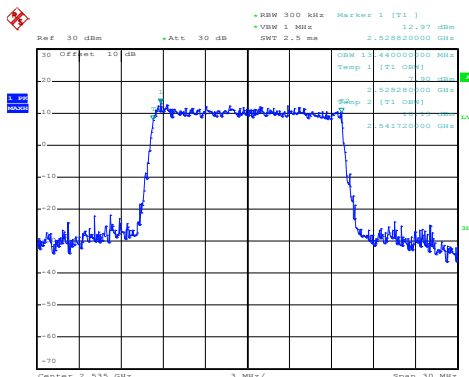
Modulation:QPSK



Date: 9.MAY.2017 21:12:41

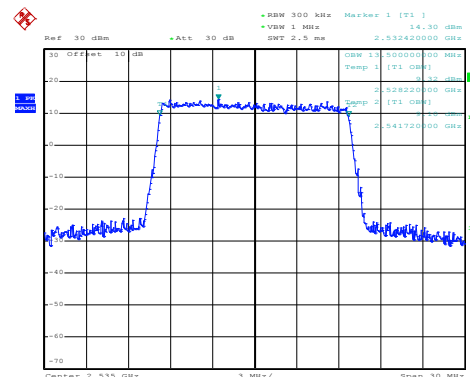
Lowest channel

Modulation:16QAM



Date: 9.MAY.2017 21:13:08

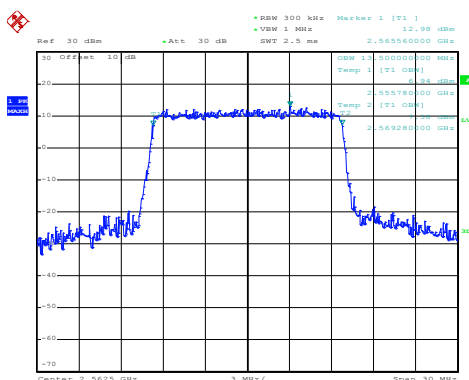
Modulation:QPSK



Date: 9.MAY.2017 21:13:04

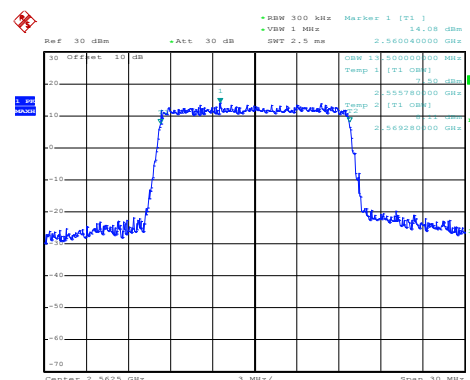
Middle channel

Modulation:16QAM



Date: 9.MAY.2017 21:13:57

Modulation: QPSK

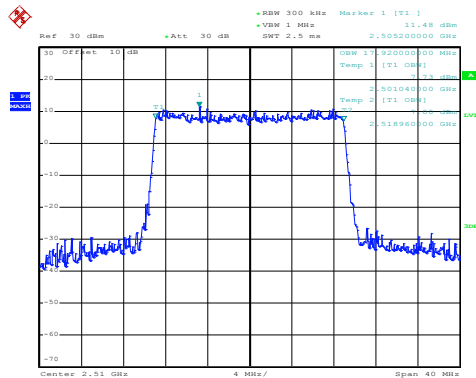


Date: 9.MAY.2017 21:13:52

Highest channel

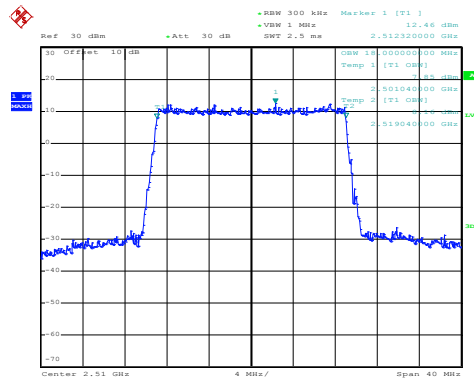
Test Item:99% Occupy bandwidth  
BW: 20MHz

Modulation:16QAM



Date: 9.MAY.2017 21:14:32

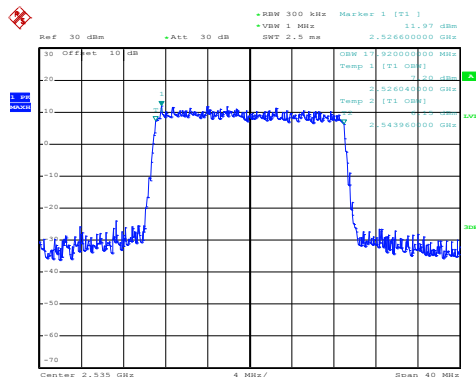
Modulation:QPSK



Date: 9.MAY.2017 21:14:28

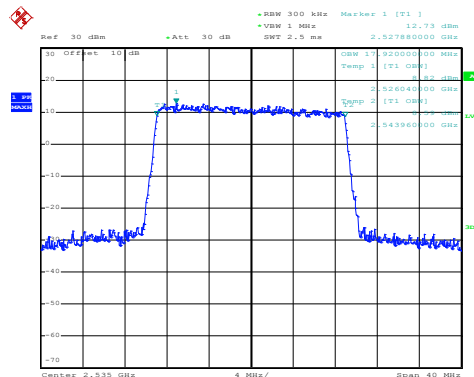
Lowest channel

Modulation:16QAM



Date: 9.MAY.2017 21:15:21

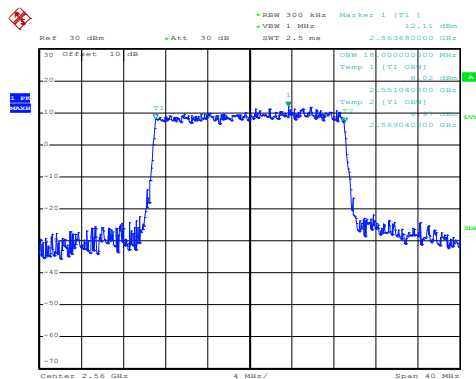
Modulation:QPSK



Date: 9.MAY.2017 21:15:17

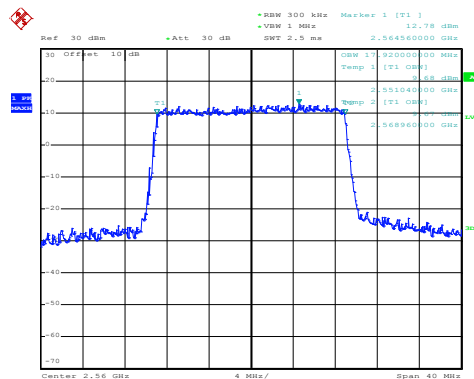
Middle channel

Modulation:16QAM



Date: 9.MAY.2017 21:15:43

Modulation:QPSK



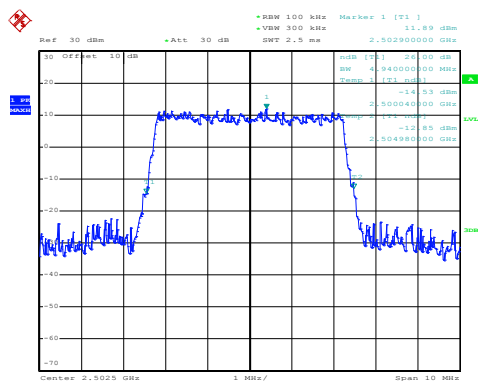
Date: 9.MAY.2017 21:15:38

Highest channel

Test Item:-26dBc bandwidth

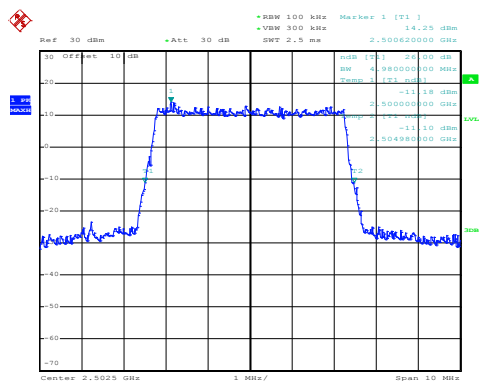
BW: 5MHz

Modulation:16QAM



Date: 9.MAY.2017 21:08:00

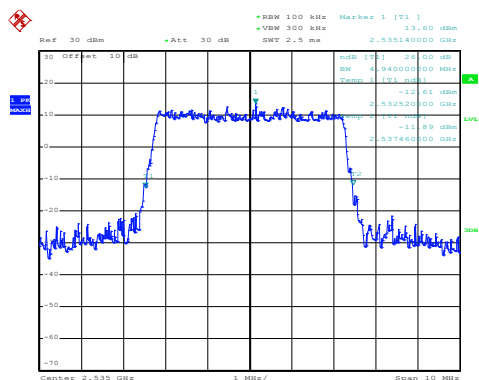
Modulation:QPSK



Date: 9.MAY.2017 21:07:54

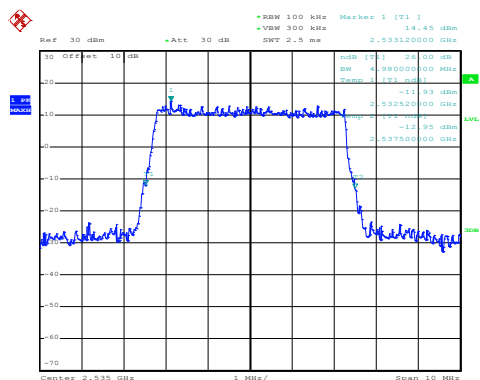
Lowest channel

Modulation:16QAM



Date: 9.MAY.2017 21:08:47

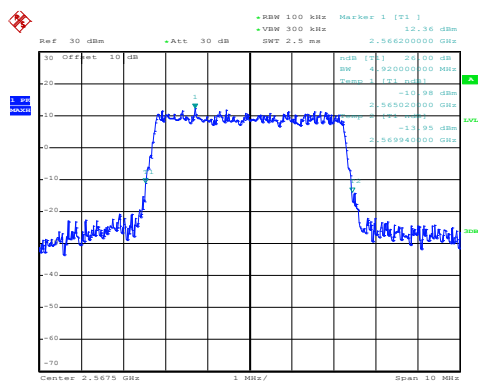
Modulation:QPSK



Date: 9.MAY.2017 21:08:41

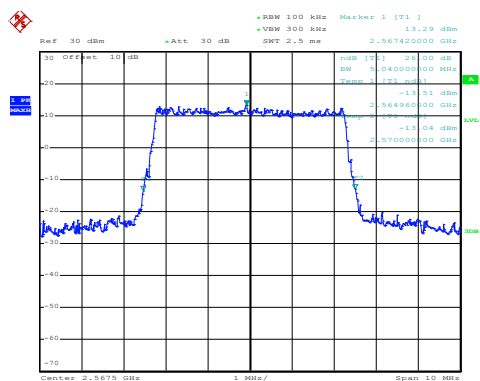
Middle channel

Modulation:16QAM



Date: 9.MAY.2017 21:09:11

Modulation:QPSK



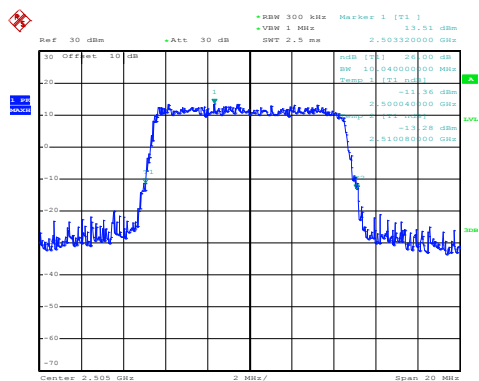
Date: 9.MAY.2017 21:09:07

Highest channel

Test Item:-26dBc bandwidth

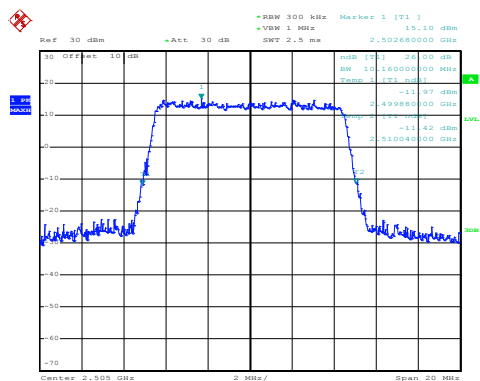
BW: 10MHz

Modulation:16QAM



Date: 9.MAY.2017 21:10:16

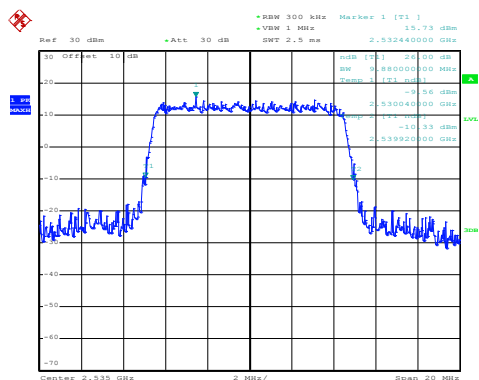
Modulation:QPSK



Date: 9.MAY.2017 21:10:12

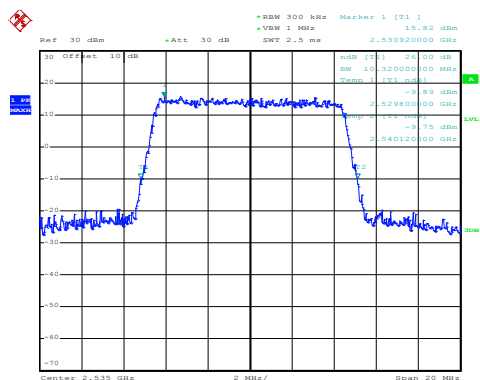
Lowest channel

Modulation:16QAM



Date: 9.MAY.2017 21:10:39

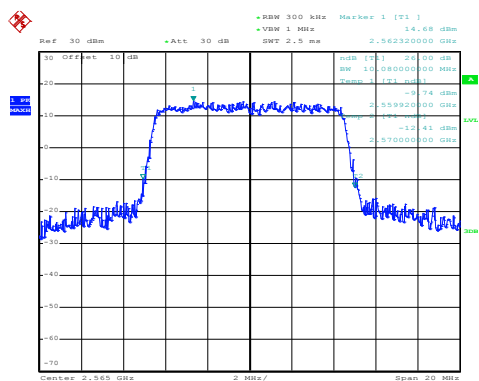
Modulation:QPSK



Date: 9.MAY.2017 21:10:34

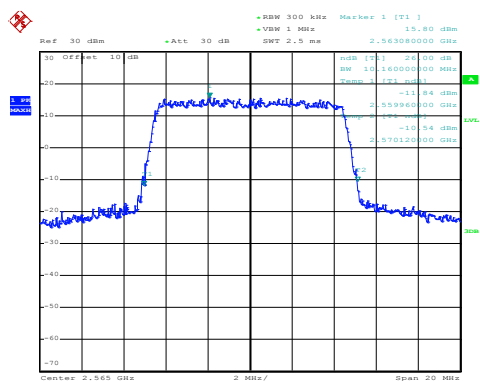
Middle channel

Modulation:16QAM



Date: 9.MAY.2017 21:11:26

Modulation:QPSK



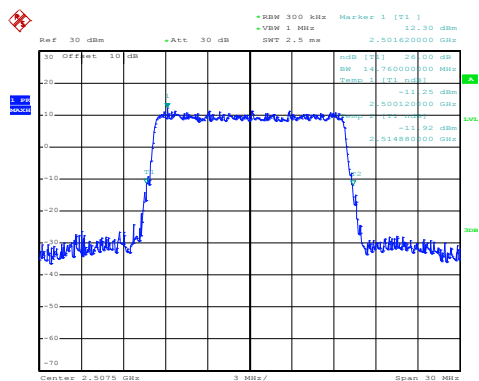
Date: 9.MAY.2017 21:11:21

Highest channel

Test Item:-26dBc bandwidth

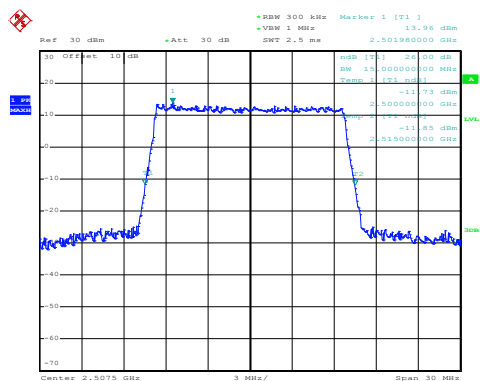
BW: 15MHz

Modulation:16QAM



Date: 9.MAY.2017 21:12:34

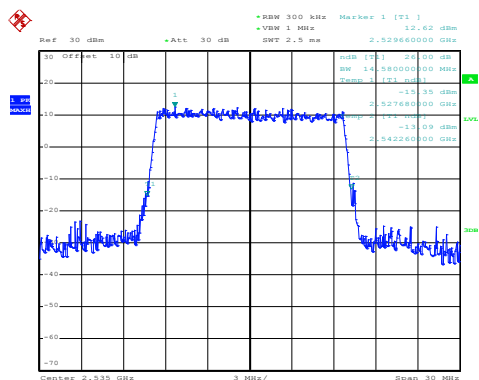
Modulation:QPSK



Date: 9.MAY.2017 21:12:29

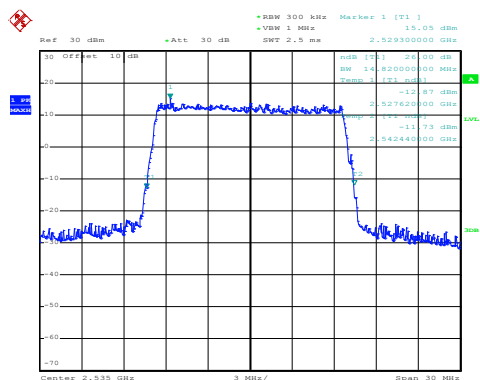
Lowest channel

Modulation:16QAM



Date: 9.MAY.2017 21:13:21

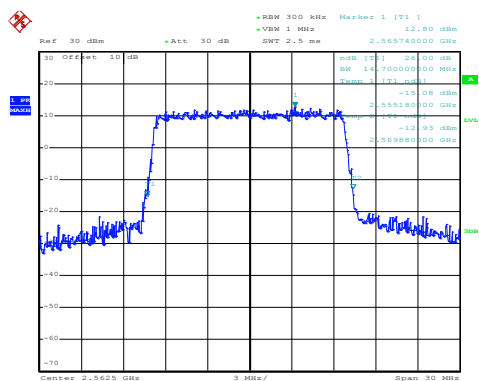
Modulation:QPSK



Date: 9.MAY.2017 21:13:16

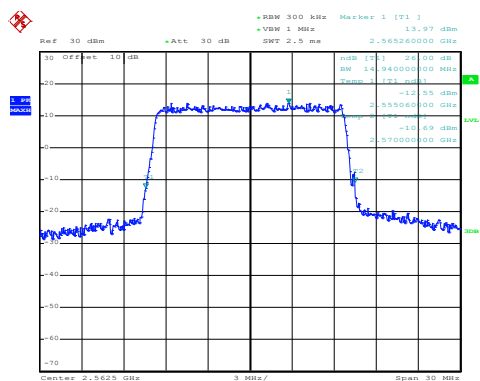
Middle channel

Modulation:16QAM



Date: 9.MAY.2017 21:13:45

Modulation:QPSK



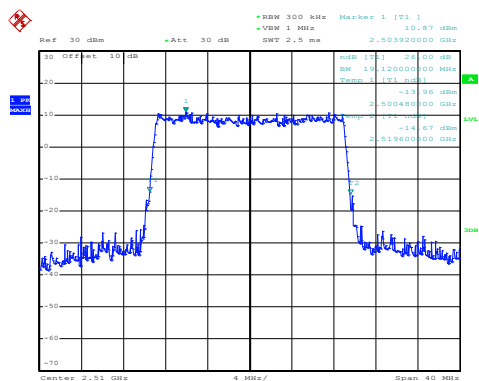
Date: 9.MAY.2017 21:13:40

Highest channel

Test Item:-26dBc bandwidth

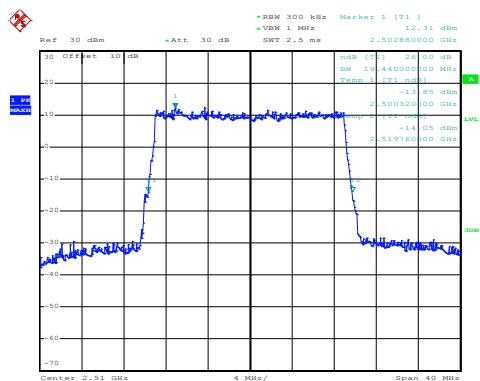
BW: 20MHz

Modulation:16QAM



Date: 9.MAY.2017 21:14:45

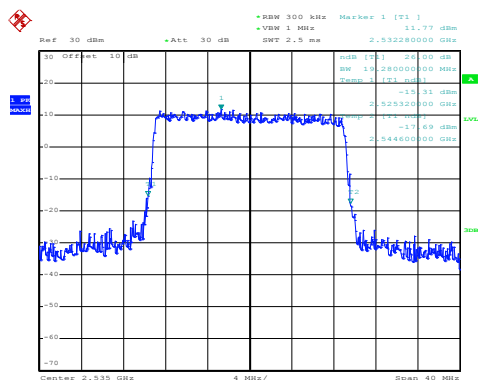
Modulation:QPSK



Date: 9.MAY.2017 21:14:40

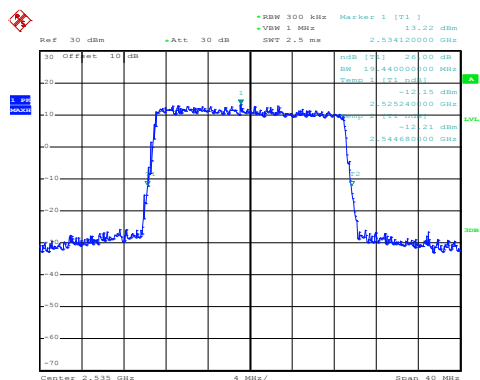
Lowest channel

Modulation:16QAM



Date: 9.MAY.2017 21:15:08

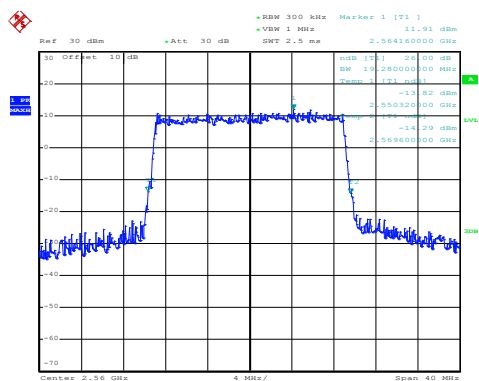
Modulation:QPSK



Date: 9.MAY.2017 21:15:04

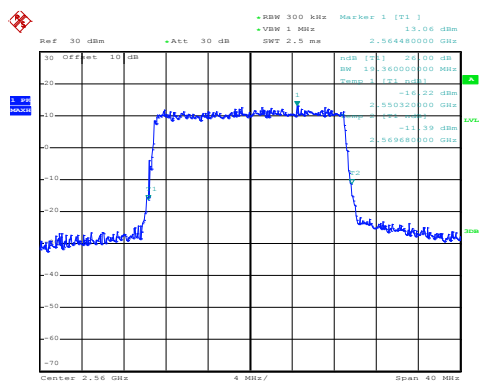
Middle channel

Modulation:16QAM



Date: 9.MAY.2017 21:15:55

Modulation:QPSK

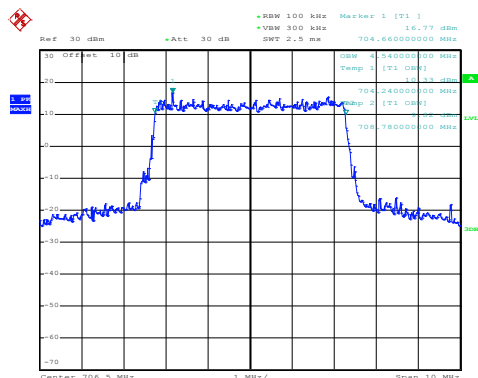


Date: 9.MAY.2017 21:15:50

Highest channel

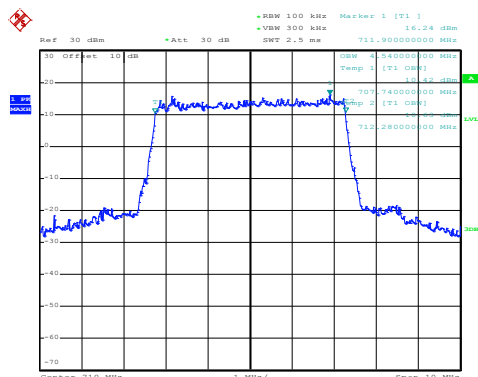
BW: 5MHz

Modulation: QPSK



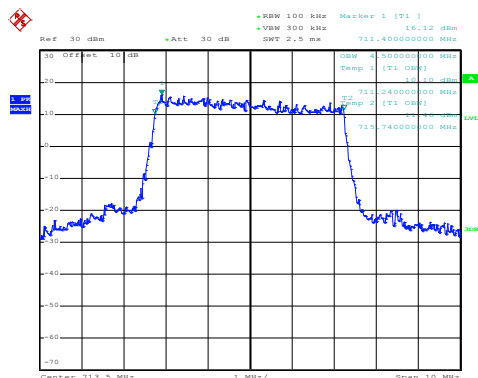
Date: 9 MAY 2017 21:30:13

Modulation: QPSK



Date: 9.MAY.2017 21:30:38

Modulation: QPSK

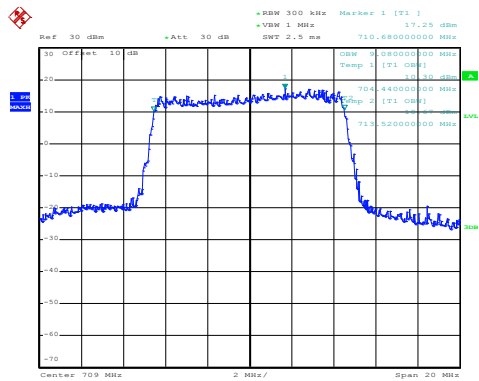


Date: 9.MAY.2017 21:31:40

## Highest channel

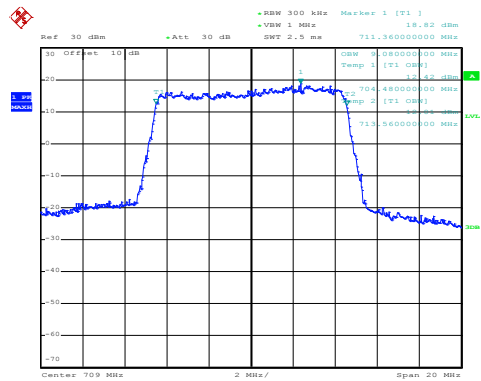
Test Item:99% Occupy bandwidth  
BW: 10MHz

Modulation:16QAM



Date: 9.MAY.2017 21:32:27

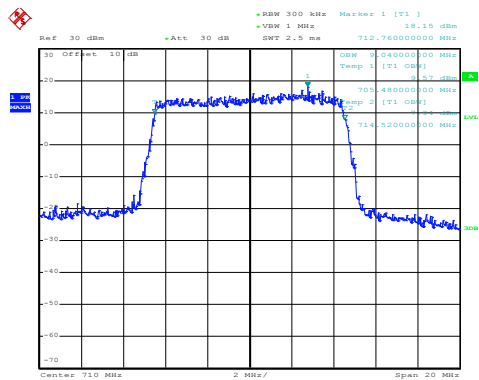
Modulation: QPSK



Date: 9.MAY.2017 21:32:22

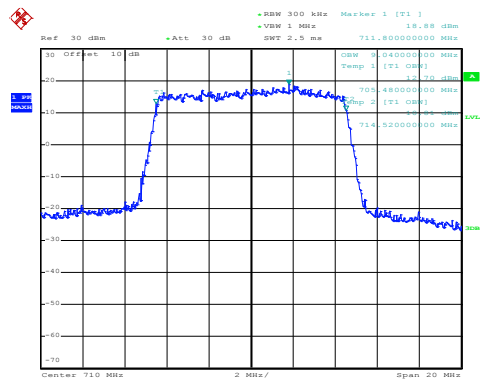
Lowest channel

Modulation:16QAM



Date: 9.MAY.2017 21:33:21

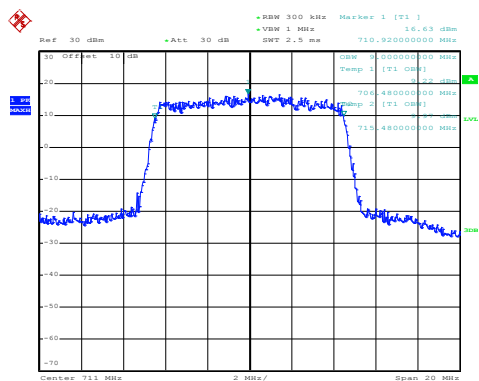
Modulation: QPSK



Date: 9.MAY.2017 21:33:17

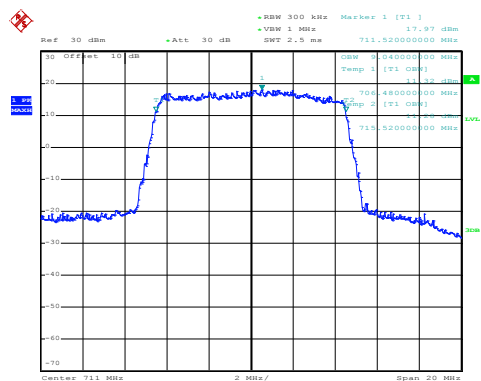
Middle channel

Modulation:16QAM



Date: 9.MAY.2017 21:33:52

Modulation: QPSK



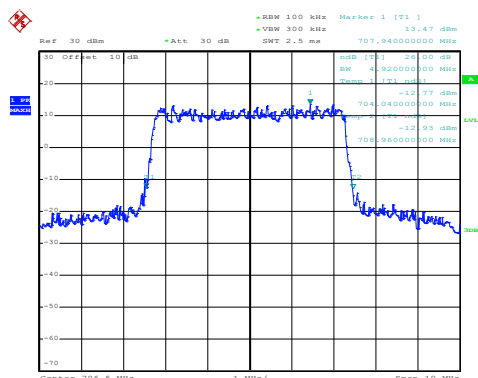
Date: 9.MAY.2017 21:33:47

Highest channel

Test Item:-26dBc bandwidth

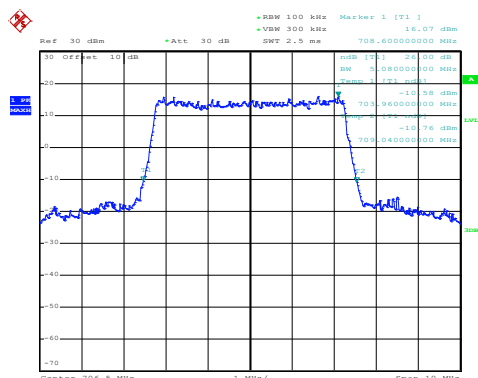
BW: 5MHz

Modulation:16QAM



Date: 9.MAY.2017 21:30:07

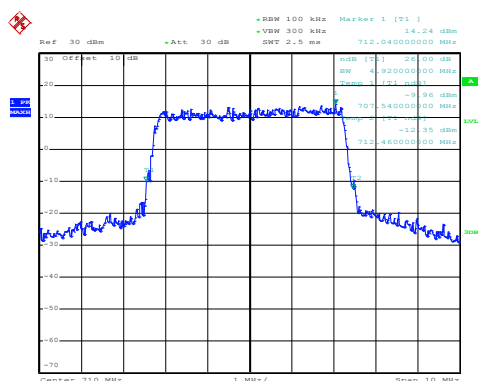
Modulation: QPSK



Date: 9.MAY.2017 21:30:02

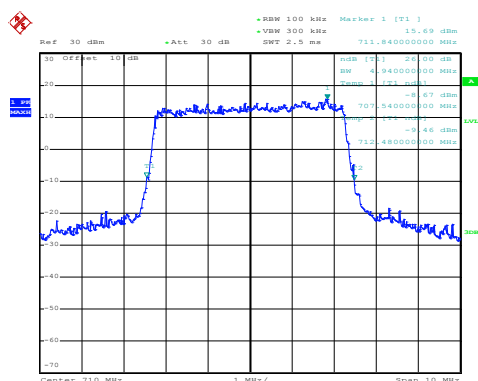
Lowest channel

Modulation:16QAM



Date: 9.MAY.2017 21:30:56

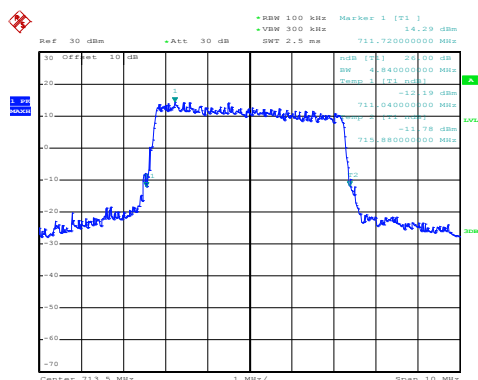
Modulation: QPSK



Date: 9.MAY.2017 21:30:51

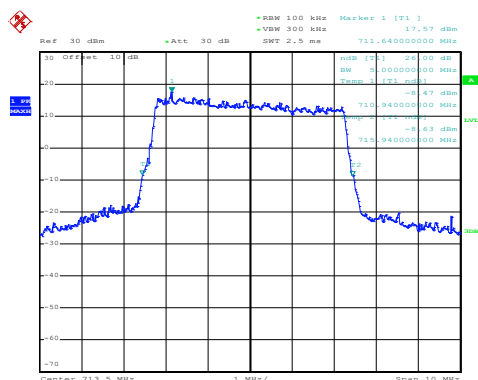
Middle channel

Modulation:16QAM



Date: 9.MAY.2017 21:31:31

Modulation: QPSK

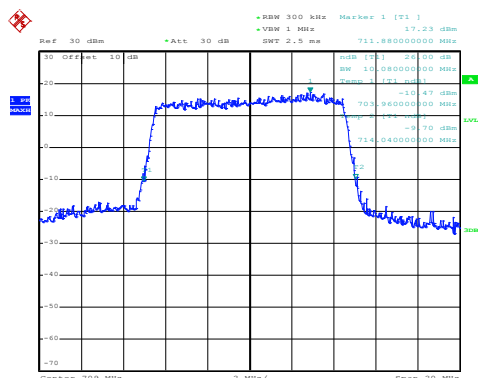


Date: 9.MAY.2017 21:31:24

Highest channel

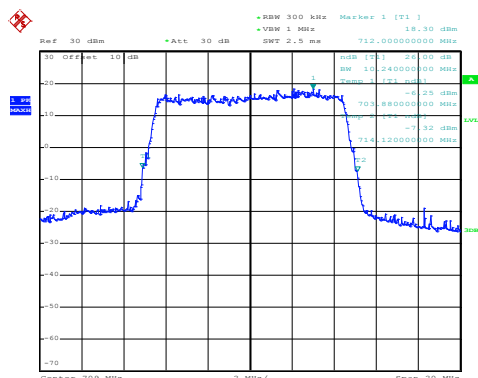
Test Item:-26dBc bandwidth  
BW: 10MHz

Modulation:16QAM



Date: 9.MAY.2017 21:32:40

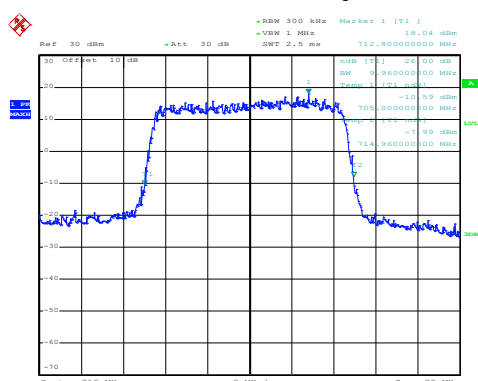
Modulation: QPSK



Date: 9.MAY.2017 21:32:34

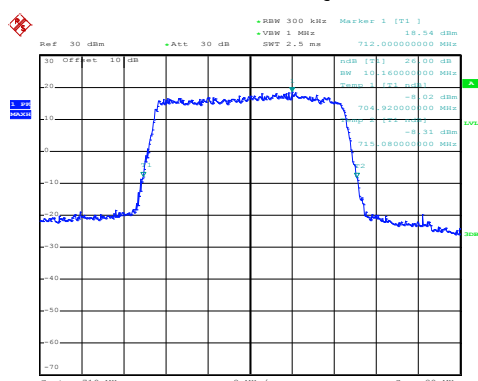
Lowest channel

Modulation:16QAM



Date: 9.MAY.2017 21:33:09

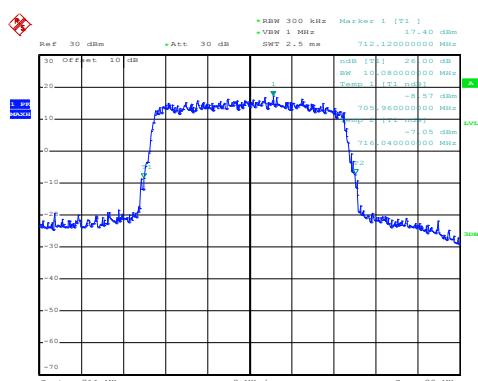
Modulation: QPSK



Date: 9.MAY.2017 21:33:04

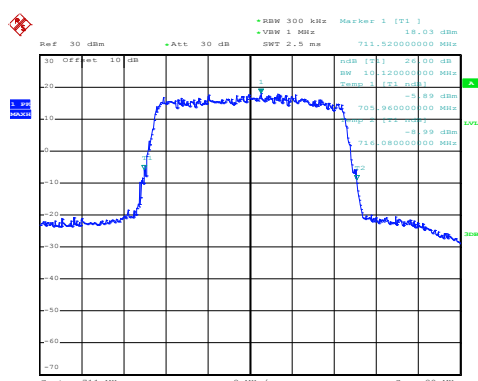
Middle channel

Modulation:16QAM



Date: 9.MAY.2017 21:34:04

Modulation: QPSK



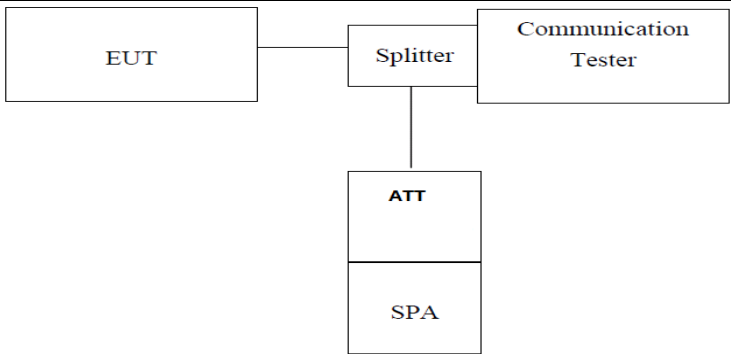
Date: 9.MAY.2017 21:33:59

Highest channel

## 6.8 Modulation Characteristic

According to FCC § 2.1047(d), Part 24E & 27H & 27L & 27M & 22H there is no specific requirement for digital modulation, therefore modulation characteristic is not presented.

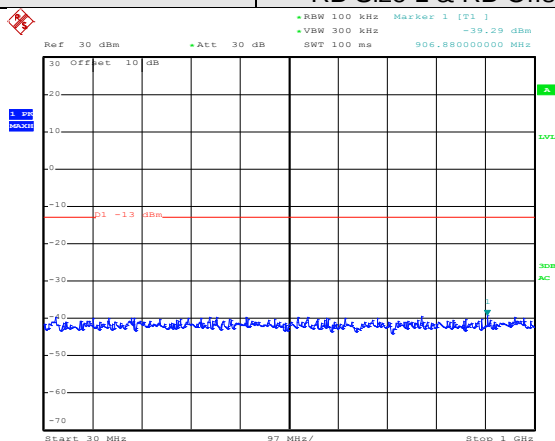
## 6.9 Out of band emission at antenna terminals

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Requirement: | FCC Part 22.917(a), Part 24.238 (a), part 27.53(g), part 27.53(h), Part 27.53(m)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Test Method:      | FCC part 2.1051                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Limit:            | Band2, Band4, Band5, Band12, Band17: The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10}(P)$ dB (-13 dBm). Band7: For mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log(P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log(P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log(P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than $43 + 10 \log(P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log(P)$ dB at or below 2490.5 MHz. |
| Test setup:       |  <p><i>Note: Measurement setup for testing on Antenna connector</i></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:

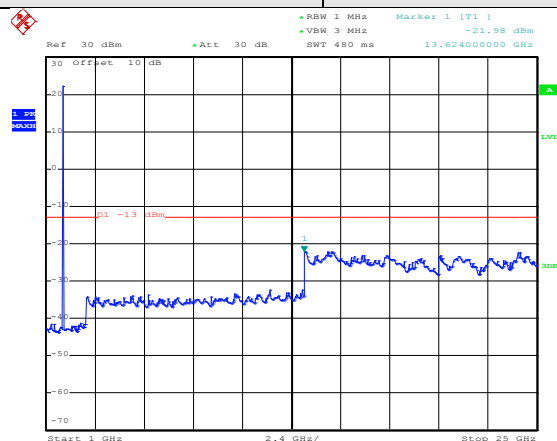
**Spurious emission**  
**LTE band 2 Part: 1.4MHz**

|            |                                                      |               |                |
|------------|------------------------------------------------------|---------------|----------------|
| Test Mode: | LTE band 2(1.4 MHz 16QAM)<br>RB Size 1 & RB Offset 0 | Test Channel: | Lowest channel |
|------------|------------------------------------------------------|---------------|----------------|



Date: 16.MAY.2017 22:04:36

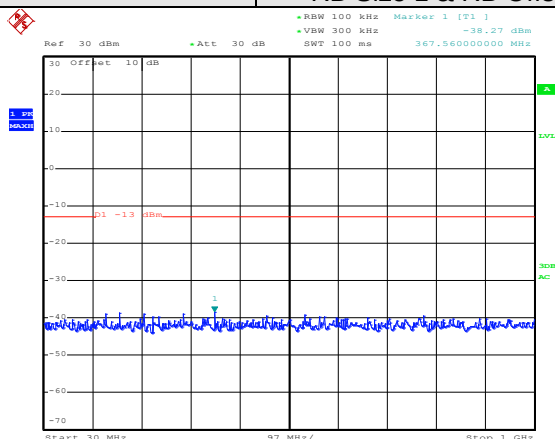
30MHz~1GHz



Date: 16.MAY.2017 18:46:56

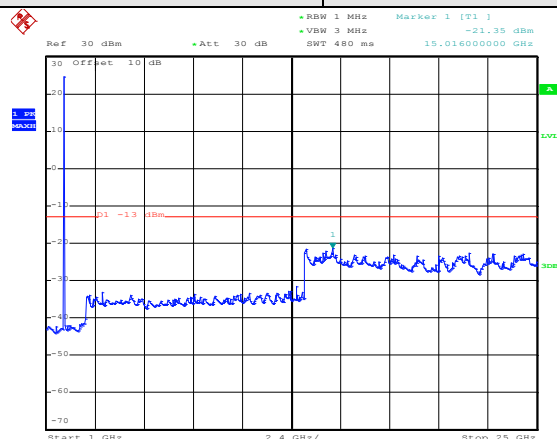
1GHz~25GHz

|            |                                                      |               |                |
|------------|------------------------------------------------------|---------------|----------------|
| Test Mode: | LTE band 2(1.4 MHz 16QAM)<br>RB Size 1 & RB Offset 0 | Test Channel: | Middle channel |
|------------|------------------------------------------------------|---------------|----------------|



Date: 16.MAY.2017 22:05:10

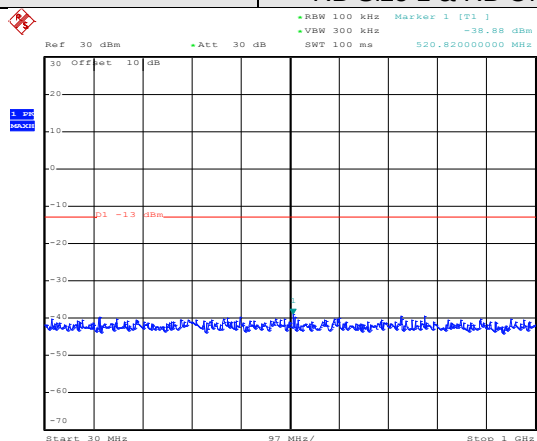
30MHz~1GHz



Date: 16.MAY.2017 18:49:58

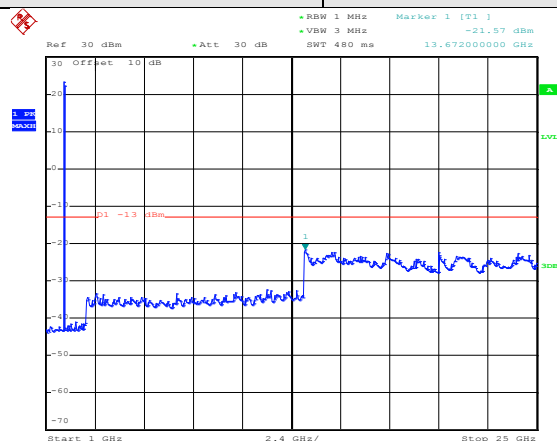
1GHz~25GHz

|            |                                                     |               |                 |
|------------|-----------------------------------------------------|---------------|-----------------|
| Test Mode: | LTE band 2(1.4 MHz16QAM)<br>RB Size 1 & RB Offset 0 | Test Channel: | Highest channel |
|------------|-----------------------------------------------------|---------------|-----------------|



Date: 16.MAY.2017 22:05:53

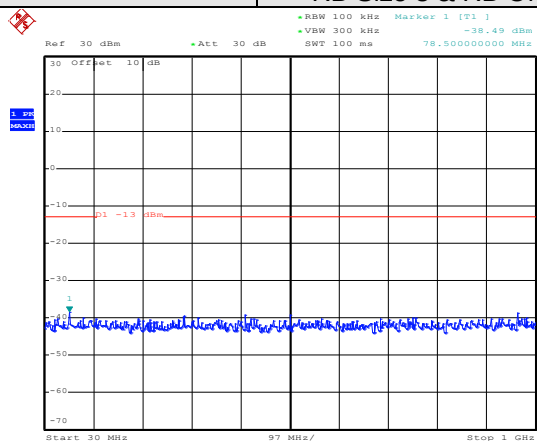
30MHz~1GHz



Date: 16.MAY.2017 18:51:22

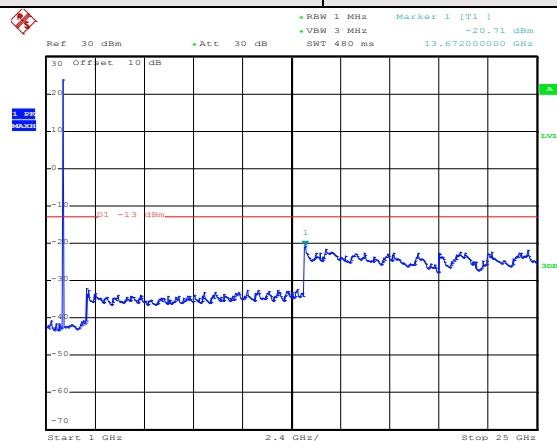
1GHz~25GHz

|            |                                                      |               |                |
|------------|------------------------------------------------------|---------------|----------------|
| Test Mode: | LTE band 2(1.4 MHz 16QAM)<br>RB Size 3 & RB Offset 0 | Test Channel: | Lowest channel |
|------------|------------------------------------------------------|---------------|----------------|



Date: 16.MAY.2017 22:04:47

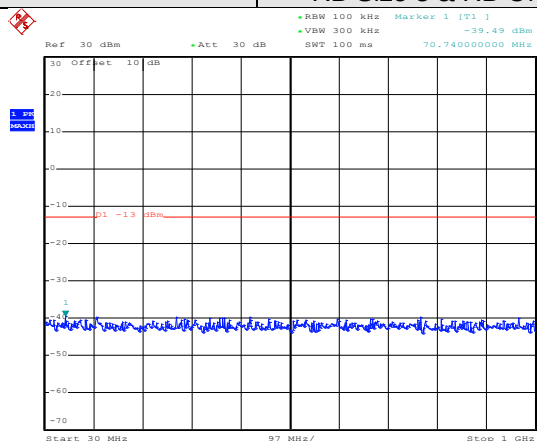
30MHz~1GHz



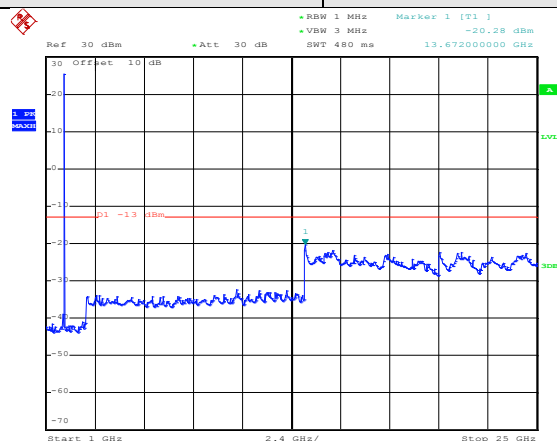
Date: 16.MAY.2017 18:47:27

1GHz~25GHz

|            |                                                      |               |                |
|------------|------------------------------------------------------|---------------|----------------|
| Test Mode: | LTE band 2(1.4 MHz 16QAM)<br>RB Size 3 & RB Offset 0 | Test Channel: | Middle channel |
|------------|------------------------------------------------------|---------------|----------------|

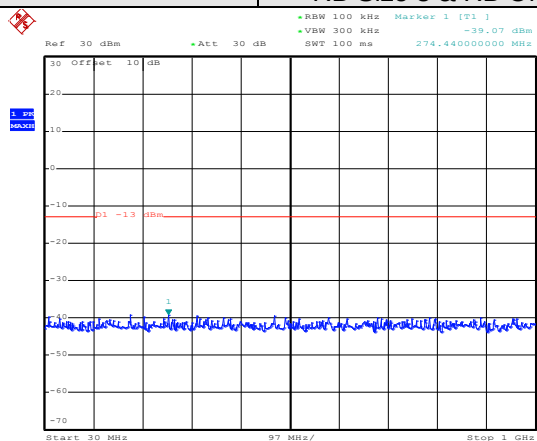


Date: 16.MAY.2017 22:05:21

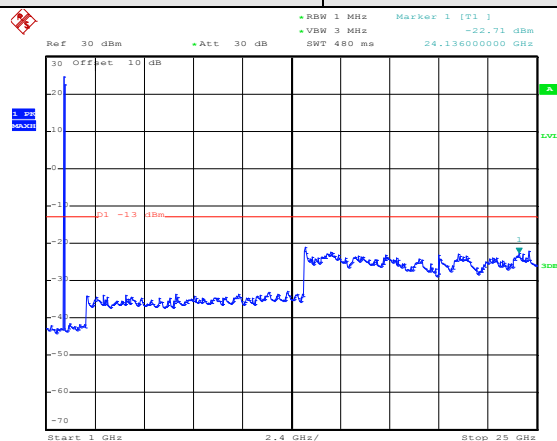


Date: 16.MAY.2017 18:50:30

|            |                                                     |               |                 |
|------------|-----------------------------------------------------|---------------|-----------------|
| Test Mode: | LTE band 2(1.4 MHz16QAM)<br>RB Size 3 & RB Offset 0 | Test Channel: | Highest channel |
|------------|-----------------------------------------------------|---------------|-----------------|

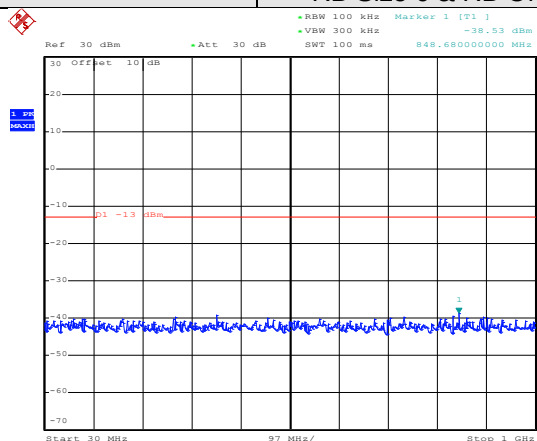


Date: 16.MAY.2017 22:06:04



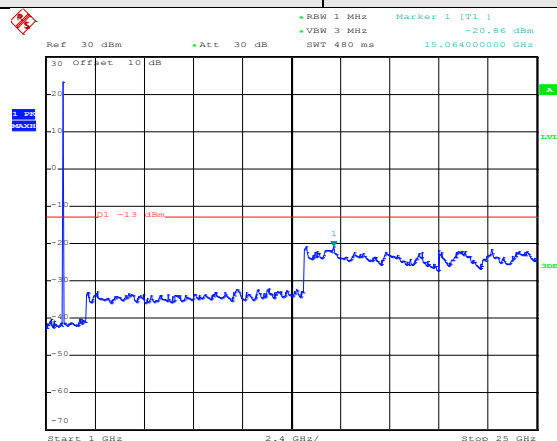
Date: 16.MAY.2017 18:51:44

|            |                                                      |               |                |
|------------|------------------------------------------------------|---------------|----------------|
| Test Mode: | LTE band 2(1.4 MHz 16QAM)<br>RB Size 6 & RB Offset 0 | Test Channel: | Lowest channel |
|------------|------------------------------------------------------|---------------|----------------|



Date: 16.MAY.2017 22:04:56

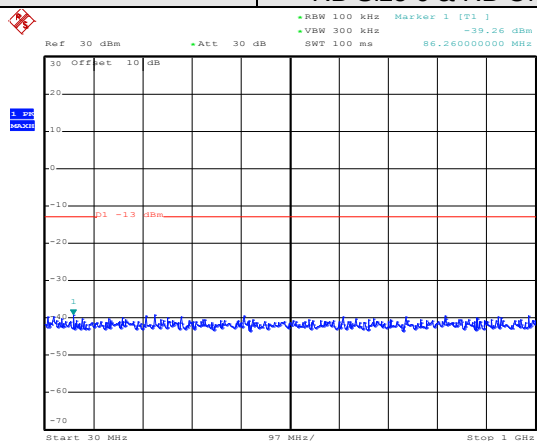
30MHz~1GHz



Date: 16.MAY.2017 18:49:20

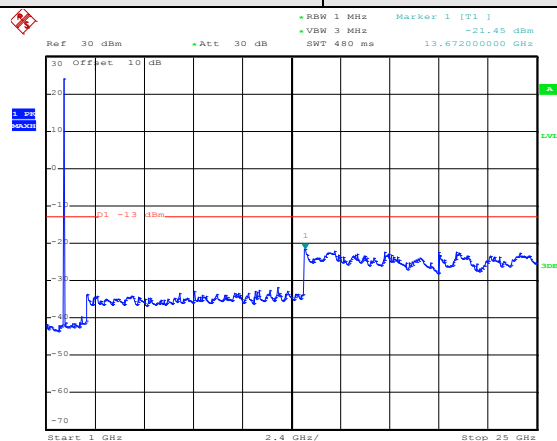
1GHz~25GHz

|            |                                                      |               |                |
|------------|------------------------------------------------------|---------------|----------------|
| Test Mode: | LTE band 2(1.4 MHz 16QAM)<br>RB Size 6 & RB Offset 0 | Test Channel: | Middle channel |
|------------|------------------------------------------------------|---------------|----------------|



Date: 16.MAY.2017 22:05:31

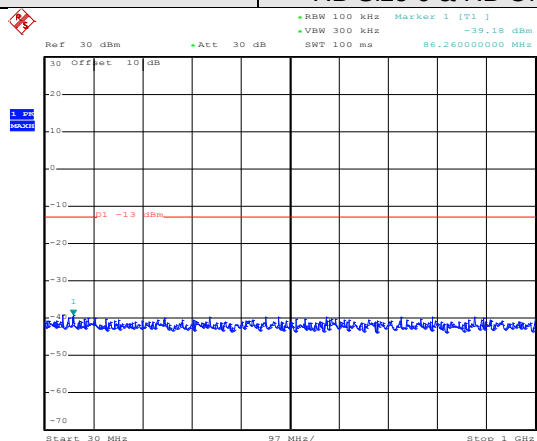
30MHz~1GHz



Date: 16.MAY.2017 18:50:47

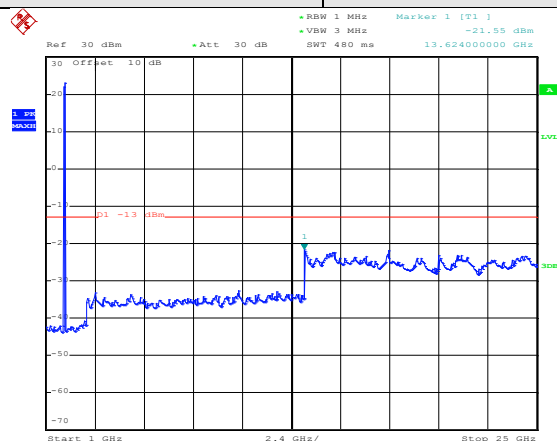
1GHz~25GHz

|            |                                                      |               |                 |
|------------|------------------------------------------------------|---------------|-----------------|
| Test Mode: | LTE band 2(1.4 MHz 16QAM)<br>RB Size 6 & RB Offset 0 | Test Channel: | Highest channel |
|------------|------------------------------------------------------|---------------|-----------------|



Date: 16.MAY.2017 22:06:15

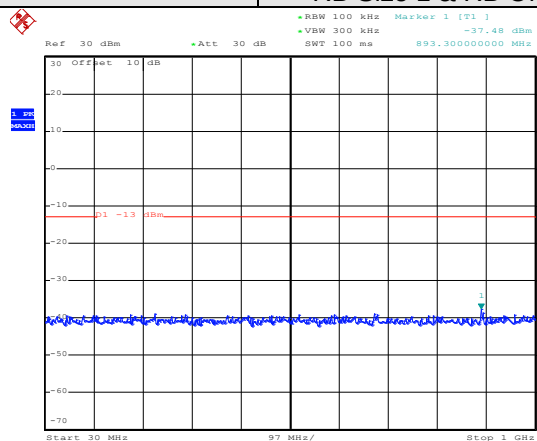
30MHz~1GHz



Date: 16.MAY.2017 18:52:02

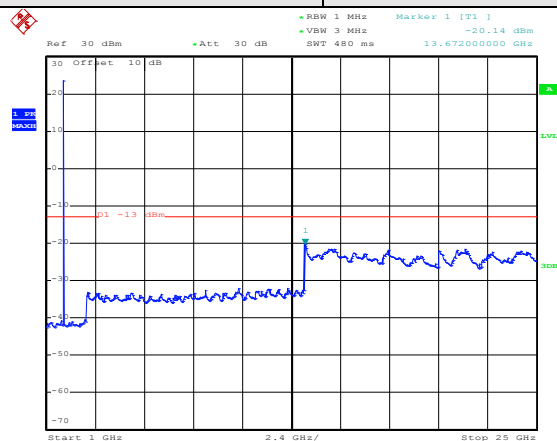
1GHz~25GHz

|            |                                                     |               |                |
|------------|-----------------------------------------------------|---------------|----------------|
| Test Mode: | LTE band 2(1.4 MHz QPSK)<br>RB Size 1 & RB Offset 0 | Test Channel: | Lowest channel |
|------------|-----------------------------------------------------|---------------|----------------|



Date: 16.MAY.2017 22:04:32

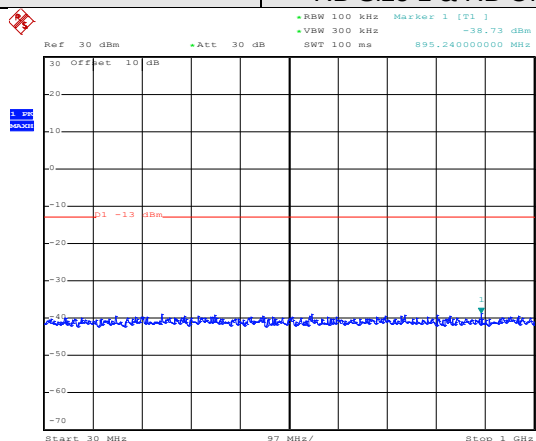
30MHz~1GHz



Date: 16.MAY.2017 18:46:44

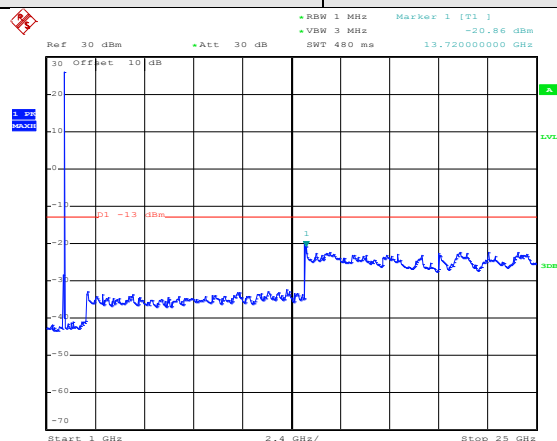
1GHz~25GHz

|            |                                                     |               |                |
|------------|-----------------------------------------------------|---------------|----------------|
| Test Mode: | LTE band 2(1.4 MHz QPSK)<br>RB Size 1 & RB Offset 0 | Test Channel: | Middle channel |
|------------|-----------------------------------------------------|---------------|----------------|



Date: 16.MAY.2017 22:05:07

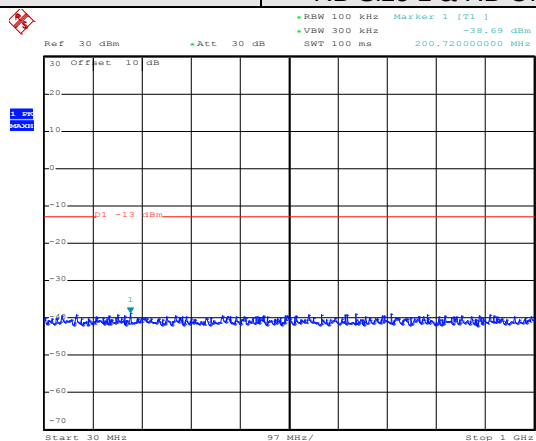
30MHz~1GHz



Date: 16.MAY.2017 18:49:49

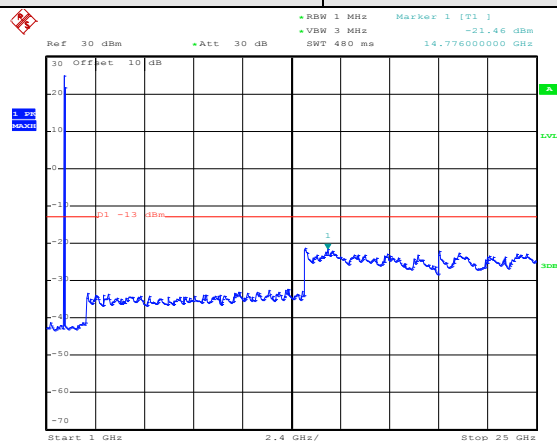
1GHz~25GHz

|            |                                                     |               |                 |
|------------|-----------------------------------------------------|---------------|-----------------|
| Test Mode: | LTE band 2(1.4 MHz QPSK)<br>RB Size 1 & RB Offset 0 | Test Channel: | Highest channel |
|------------|-----------------------------------------------------|---------------|-----------------|



Date: 16.MAY.2017 22:05:50

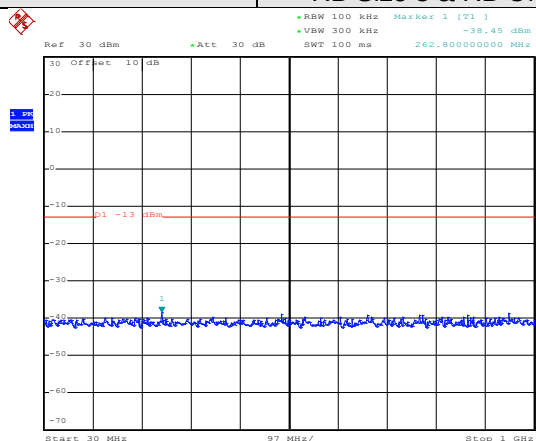
30MHz~1GHz



Date: 16.MAY.2017 18:51:13

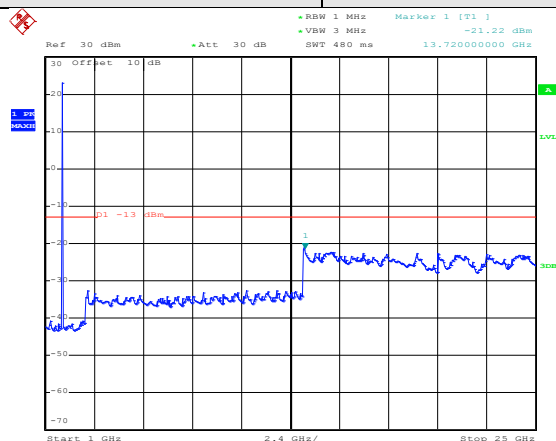
1GHz~25GHz

|            |                                                     |               |                |
|------------|-----------------------------------------------------|---------------|----------------|
| Test Mode: | LTE band 2(1.4 MHz QPSK)<br>RB Size 3 & RB Offset 0 | Test Channel: | Lowest channel |
|------------|-----------------------------------------------------|---------------|----------------|



Date: 16.MAY.2017 22:04:44

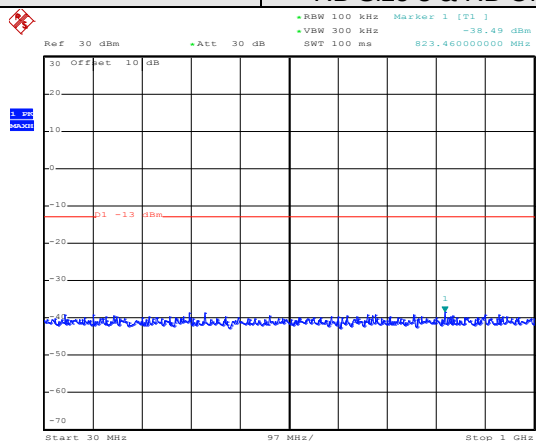
30MHz~1GHz



Date: 16.MAY.2017 18:47:15

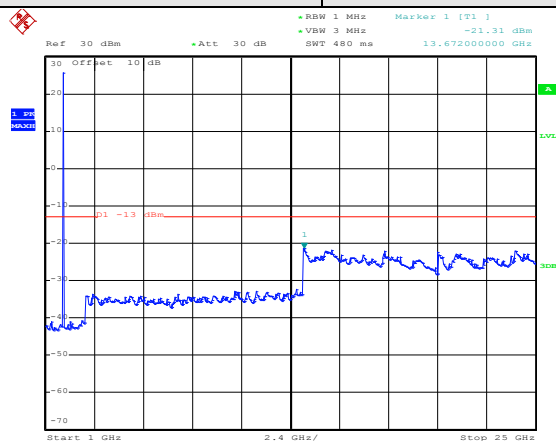
1GHz~25GHz

|            |                                                     |               |                |
|------------|-----------------------------------------------------|---------------|----------------|
| Test Mode: | LTE band 2(1.4 MHz QPSK)<br>RB Size 3 & RB Offset 0 | Test Channel: | Middle channel |
|------------|-----------------------------------------------------|---------------|----------------|



Date: 16.MAY.2017 22:05:18

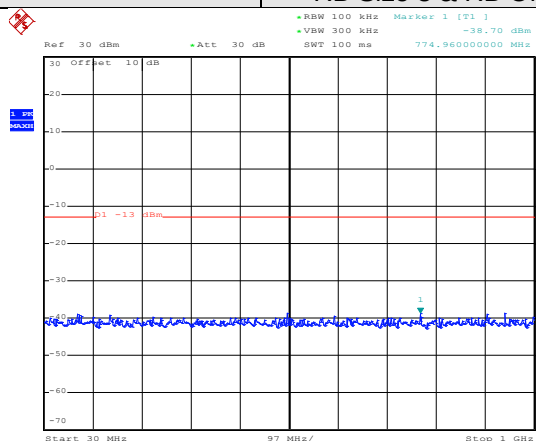
30MHz~1GHz



Date: 16.MAY.2017 18:50:20

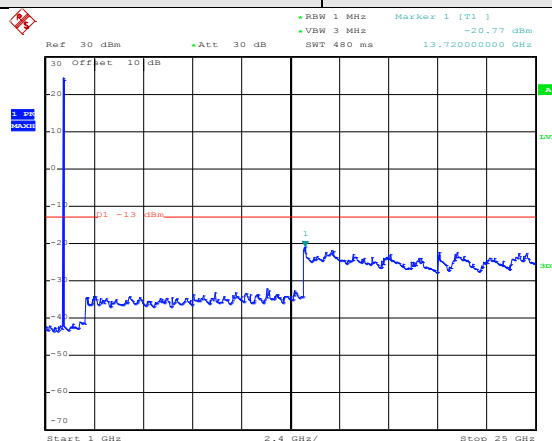
1GHz~25GHz

|            |                                                     |               |                 |
|------------|-----------------------------------------------------|---------------|-----------------|
| Test Mode: | LTE band 2(1.4 MHz QPSK)<br>RB Size 3 & RB Offset 0 | Test Channel: | Highest channel |
|------------|-----------------------------------------------------|---------------|-----------------|



Date: 16.MAY.2017 22:06:00

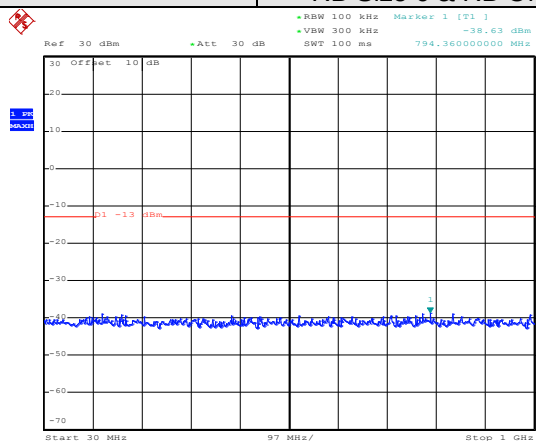
30MHz~1GHz



Date: 16.MAY.2017 18:51:35

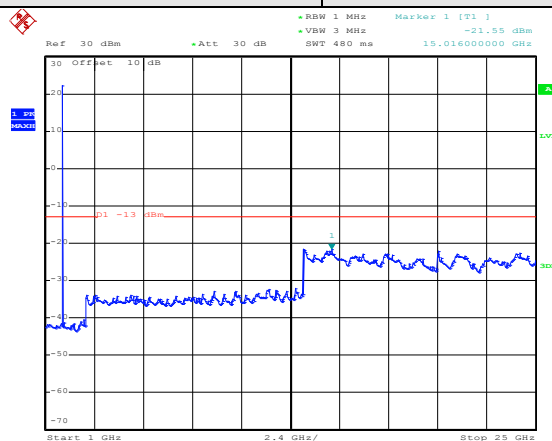
1GHz~25GHz

|            |                                                     |               |                |
|------------|-----------------------------------------------------|---------------|----------------|
| Test Mode: | LTE band 2(1.4 MHz QPSK)<br>RB Size 6 & RB Offset 0 | Test Channel: | Lowest channel |
|------------|-----------------------------------------------------|---------------|----------------|



Date: 16.MAY.2017 22:04:53

30MHz~1GHz



Date: 16.MAY.2017 18:47:42

1GHz~25GHz