

# Annex 1: Measurement diagrams to TEST REPORT No.: 16-1-0109701T05a

According to:  
**FCC Regulations**  
Part 24, Part 27, Part 15C - §15.207

**IC-Regulations**  
RSS-133 Issue 6, RSS-139 Issue 2  
RSS-130 Issue 1, RSS-Gen Issue 4

for

Gemalto M2M GmbH

ELS31-US LTE module

FCC-ID: QIPELS31-US  
IC: 7830A-ELS31US

| Laboratory Accreditation and Listings                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                        |                                                                                                                                                         |                                                                                                                                                                                                      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  <p><b>DAkkS</b><br/>Deutsche<br/>Akkreditierungsstelle<br/>D-PL-12047-01-01</p>                                                                                                                                                                        |  <p><b>FCC</b><br/>FEDERAL COMMUNICATIONS COMMISSION<br/>USA<br/>MRA US-EU 0003</p> |  <p>Industry Canada<br/>Reg. No.: 3462D-2<br/>Reg. No.: 3462D-3</p> |  <p>Voluntary Controls for<br/>Electromagnetic Emissions<br/>Reg. No.:<br/>R-2666 C-2914,<br/>T-1967, G-301</p> |
|  <p><b>WiFi</b><br/>ALLIANCE<br/>AUTHORIZED<br/>RF LABORATORY</p>                                                                                                                                                                                       |  <p><b>ctia</b> Authorized<sup>TM</sup><br/>Test Lab<br/>Lab Code: 20011130-00</p>  |                                                                                                                                                         |                                                                                                                                                                                                      |
| accredited according to DIN EN ISO/IEC 17025                                                                                                                                                                                                                                                                                               |                                                                                                                                                                        |                                                                                                                                                         |                                                                                                                                                                                                      |
| <p><b>CETECOM GmbH</b><br/>Laboratory Radio Communications &amp; Electromagnetic Compatibility<br/>Im Teelbruch 116 • 45219 Essen • Germany<br/>Registered in Essen, Germany, Reg. No.: HRB Essen 8984<br/>Tel.: + 49 (0) 20 54 / 95 19-954 • Fax: + 49 (0) 20 54 / 95 19-964<br/>E-mail: info@cetecom.com • Internet: www.cetecom.com</p> |                                                                                                                                                                        |                                                                                                                                                         |                                                                                                                                                                                                      |

## Table of contents

|                                                                                                                                                  |          |
|--------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| <b>1. MEASUREMENT DIAGRAMS.....</b>                                                                                                              | <b>3</b> |
| 1.1. Power conducted LTE-Band 4.....                                                                                                             | 3        |
| 1.2. Power conducted LTE-Band 2.....                                                                                                             | 4        |
| 1.3. Power conducted LTE-Band 12.....                                                                                                            | 5        |
| 1.4. PAPR-Value (CCDF plots).....                                                                                                                | 6        |
| 1.5. Conducted Emissions on AC-mains .....                                                                                                       | 30       |
| 1.6. Magnetic field emissions radiated (LTE Band 2) .....                                                                                        | 36       |
| 1.7. Spurious emissions radiated (LTE Band 2) .....                                                                                              | 41       |
| 1.8. Magnetic field emissions radiated (LTE Band 4) .....                                                                                        | 45       |
| 1.9. Spurious emissions radiated (LTE Band 4) .....                                                                                              | 47       |
| 1.10. Magnetic field emissions radiated (LTE Band 12) .....                                                                                      | 52       |
| 1.11. Spurious emissions radiated (LTE Band 12) .....                                                                                            | 56       |
| 1.12. Radiated emissions – band-edge (LTE Band 2).....                                                                                           | 59       |
| 1.13. Radiated emissions – band-edge (LTE Band 4) with signal bandwidth of 5MHz.....                                                             | 67       |
| 1.14. Radiated emissions – band-edge (LTE Band 12).....                                                                                          | 77       |
| 1.15. 26dBc Emission bandwidth .....                                                                                                             | 87       |
| 1.16. 99% occupied bandwidth.....                                                                                                                | 126      |
| 1.17. Spectrum Mask diagrams for frequency-error measurements (LTE Band 12) – Canadian requirement accord. RSS-130, Issue 1, Chapter 4.3(b)..... | 152      |
| 1.18. Spurious emissions conducted (LTE Band 2).....                                                                                             | 156      |
| 1.19. Spurious emissions conducted (LTE Band 4).....                                                                                             | 165      |
| 1.20. Spurious emissions conducted (LTE Band 12).....                                                                                            | 173      |
| 1.21. Conducted emissions – band - edge (LTE Band 2).....                                                                                        | 185      |
| 1.22. Conducted emissions – band - edge (LTE Band 4).....                                                                                        | 192      |
| 1.23. Conducted emissions – band - edge (LTE Band 12).....                                                                                       | 200      |

## 1. Measurement diagrams

### 1.1. Power conducted LTE-Band 4

| LTE-Band 4        |               |                       |                           | QPSK-Modulation     |                    |                 | 16-QAM-Modulation   |                    |                 | max. modulation QPSK | max. modulation 16-QAM | max. channel | absolute max. value |
|-------------------|---------------|-----------------------|---------------------------|---------------------|--------------------|-----------------|---------------------|--------------------|-----------------|----------------------|------------------------|--------------|---------------------|
| channel bandwidth | ARFCN ch. no. | ARFCN-Frequency [MHz] | Resource block allocation | Peak detektor [dBm] | RMS detektor [dBm] | PAR Faktor [dB] | Peak detektor [dBm] | RMS detektor [dBm] | PAR Faktor [dB] |                      |                        |              |                     |
| 5 MHz             | 19975         | 1712,5                | 1 RB low                  | 27,819              | 23,305             | 4,5135          | 27,79               | 22,356             | 5,4343          | 23,305               | 22,5                   | 23,31        | 23,86               |
|                   |               |                       | 1 RB high                 | 27,989              | 22,6014            | 5,388           | 28,037              | 21,743             | 6,2933          |                      |                        |              |                     |
|                   |               |                       | 50%RB mid                 | 28,2                | 23,2               | 5               | 28,2                | 22,5               | 5,7             |                      |                        |              |                     |
|                   |               |                       | 100%RB                    | 28,153              | 22,0125            | 6,1402          | 27,914              | 21,101             | 6,8132          |                      |                        |              |                     |
|                   | 20175         | 1732,5                | 1 RB low                  | 27,133              | 21,857             | 5,2761          | 27,494              | 21,038             | 6,4556          | 22,54                | 21,93                  |              |                     |
|                   |               |                       | 1 RB high                 | 27,165              | 22,3383            | 4,8267          | 27,335              | 21,482             | 5,8534          |                      |                        |              |                     |
|                   |               |                       | 50%RB mid                 | 27,95               | 22,54              | 5,41            | 28,5                | 21,93              | 6,57            |                      |                        |              |                     |
|                   |               |                       | 100%RB                    | 27,409              | 21,2145            | 6,1943          | 27,148              | 20,16              | 6,9875          |                      |                        |              |                     |
|                   | 20375         | 1752,5                | 1 RB low                  | 28,156              | 22,8143            | 5,3413          | 27,787              | 21,842             | 5,945           | 23,008               | 23,02                  |              |                     |
|                   |               |                       | 1 RB high                 | 28,409              | 23,0079            | 5,4006          | 28,076              | 22,043             | 6,0323          |                      |                        |              |                     |
|                   |               |                       | 50%RB mid                 | 28,43               | 22,11              | 6,32            | 28,22               | 23,02              | 5,2             |                      |                        |              |                     |
|                   |               |                       | 100%RB                    | 28,314              | 21,9406            | 6,3736          | 28,111              | 20,976             | 7,135           |                      |                        |              |                     |
| 10 MHz            | 20000         | 1715                  | 1 RB low                  | 27,562              | 22,7441            | 4,8177          | 27,508              | 22,019             | 5,4891          | 22,744               | 22,664                 |              |                     |
|                   |               |                       | 1 RB high                 | 27,208              | 21,3735            | 5,8342          | 27,433              | 20,698             | 6,7347          |                      |                        |              |                     |
|                   |               |                       | 50%RB mid                 | 27,66               | 21,82              | 5,84            | 27,9                | 20,8               | 7,1             |                      |                        |              |                     |
|                   |               |                       | 100%RB                    | 27,794              | 21,4533            | 6,3406          | 25,969              | 22,664             | 3,3048          |                      |                        |              |                     |
|                   | 20175         | 1732,5                | 1 RB low                  | 26,957              | 21,2301            | 5,7273          | 26,977              | 20,582             | 6,3953          | 21,988               | 21,892                 |              |                     |
|                   |               |                       | 1 RB high                 | 27,005              | 21,9879            | 5,0171          | 26,938              | 20,983             | 5,9546          |                      |                        |              |                     |
|                   |               |                       | 50%RB mid                 | 27,3                | 21,24              | 6,06            | 27,159              | 20,2               | 6,9585          |                      |                        |              |                     |
|                   |               |                       | 100%RB                    | 27,281              | 20,9059            | 6,3753          | 25,184              | 21,892             | 3,292           |                      |                        |              |                     |
|                   | 20350         | 1750                  | 1 RB low                  | 27,719              | 22,4491            | 5,2694          | 27,571              | 21,605             | 5,9656          | 22,449               | 22,361                 |              |                     |
|                   |               |                       | 1 RB high                 | 28,348              | 22,3403            | 6,0081          | 28,093              | 21,427             | 6,6662          |                      |                        |              |                     |
|                   |               |                       | 50%RB mid                 | 27,96               | 22,43              | 5,53            | 28,02               | 21,89              | 6,13            |                      |                        |              |                     |
|                   |               |                       | 100%RB                    | 28,044              | 21,635             | 6,4088          | 25,722              | 22,361             | 3,3608          |                      |                        |              |                     |
| 15 MHz            | 20025         | 1717,5                | 1 RB low                  | 27,244              | 22,709             | 4,5352          | 27,475              | 21,872             | 5,6031          | 22,709               | 22,841                 |              |                     |
|                   |               |                       | 1 RB high                 | 26,641              | 21,395             | 5,2458          | 27,28               | 20,571             | 6,7085          |                      |                        |              |                     |
|                   |               |                       | 50%RB mid                 | 28,76               | 21,71              | 7,05            | 28,67               | 21,7               | 6,97            |                      |                        |              |                     |
|                   |               |                       | 100%RB                    | 28,079              | 21,5037            | 6,5751          | 25,997              | 22,841             | 3,1563          |                      |                        |              |                     |
|                   | 20175         | 1732,5                | 1 RB low                  | 27,101              | 21,3501            | 5,7507          | 27,958              | 22,397             | 5,5608          | 22,442               | 22,397                 |              |                     |
|                   |               |                       | 1 RB high                 | 27,126              | 22,4421            | 4,6836          | 27,3                | 21,777             | 5,5234          |                      |                        |              |                     |
|                   |               |                       | 50%RB mid                 | 27,93               | 21,803             | 6,127           | 27,996              | 22,086             | 5,91            |                      |                        |              |                     |
|                   |               |                       | 100%RB                    | 27,743              | 21,4422            | 6,3003          | 27,833              | 21,968             | 5,8654          |                      |                        |              |                     |
|                   | 20325         | 1747,5                | 1 RB low                  | 27,137              | 22,6658            | 4,4711          | 27,351              | 21,803             | 5,5485          | 22,666               | 22,548                 |              |                     |
|                   |               |                       | 1 RB high                 | 27,708              | 22,4151            | 5,2932          | 28,092              | 21,661             | 6,4314          |                      |                        |              |                     |
|                   |               |                       | 50%RB mid                 | 28,44               | 22,45              | 5,99            | 28,672              | 22,548             | 6,124           |                      |                        |              |                     |
|                   |               |                       | 100%RB                    | 28,34               | 22,1561            | 6,1836          | 25,741              | 22,513             | 3,2285          |                      |                        |              |                     |
| 20 MHz            | 20050         | 1720                  | 1 RB low                  | 27,703              | 23,7188            | 3,9845          | 27,656              | 23,14              | 4,5165          | 23,719               | 23,861                 |              |                     |
|                   |               |                       | 1 RB high                 | 27,514              | 22,7521            | 4,7617          | 27,875              | 22,169             | 5,7059          |                      |                        |              |                     |
|                   |               |                       | 50%RB mid                 | 28,41               | 21,21              | 7,2             | 29,18               | 21,155             | 8,025           |                      |                        |              |                     |
|                   |               |                       | 100%RB                    | 28,408              | 21,5174            | 6,8902          | 27,003              | 23,861             | 3,1419          |                      |                        |              |                     |
|                   | 20175         | 1732,5                | 1 RB low                  | 27,967              | 22,4249            | 5,5416          | 27,725              | 21,834             | 5,8903          | 22,858               | 23,288                 |              |                     |
|                   |               |                       | 1 RB high                 | 27,692              | 22,8576            | 4,8347          | 27,692              | 22,858             | 4,8347          |                      |                        |              |                     |
|                   |               |                       | 50%RB mid                 | 28,004              | 21,42              | 6,584           | 27,897              | 21,418             | 6,479           |                      |                        |              |                     |
|                   |               |                       | 100%RB                    | 28,154              | 21,5328            | 6,6212          | 26,518              | 23,288             | 3,2306          |                      |                        |              |                     |
|                   | 20300         | 1745                  | 1 RB low                  | 27,362              | 23,204             | 4,158           | 27,568              | 22,747             | 4,8217          | 23,623               | 23,127                 |              |                     |
|                   |               |                       | 1 RB high                 | 28,582              | 23,6233            | 4,9586          | 28,485              | 23,127             | 5,358           |                      |                        |              |                     |
|                   |               |                       | 50%RB mid                 | 28,03               | 22,22              | 5,81            | 28,254              | 22,24              | 6,014           |                      |                        |              |                     |
|                   |               |                       | 100%RB                    | 28,376              | 22,2686            | 6,1076          | 26,365              | 23,127             | 3,2377          |                      |                        |              |                     |

## 1.2. Power conducted LTE-Band 2

| LTE-Band 2        |               |                       |                           | QPSK-Modulation     |                    |                 | 16-QAM-Modulation   |                    |                 | max. modulation QPSK | max. modulation 16QAM | max. bandwidth | absolute max. value channels/bandwidths |
|-------------------|---------------|-----------------------|---------------------------|---------------------|--------------------|-----------------|---------------------|--------------------|-----------------|----------------------|-----------------------|----------------|-----------------------------------------|
| channel bandwidth | ARFCN ch. no. | ARFCN-Frequency [MHz] | Resource block allocation | Peak detektor [dBm] | RMS detektor [dBm] | PAR Faktor [dB] | Peak detektor [dBm] | RMS detektor [dBm] | PAR Faktor [dB] |                      |                       |                |                                         |
| 5 MHz             | 18625         | 1852,5                | 1 RB low                  | 28,404              | 22,2382            | 6,1654          | 28,67               | 21,404             | 7,2657          | 22,482               | 21,791                | 22,8           |                                         |
|                   |               |                       | 1 RB high                 | 28,634              | 22,4823            | 6,1513          | 29,014              | 21,638             | 7,3768          |                      |                       |                |                                         |
|                   |               |                       | 50%RB mid                 | 28,336              | 21,5307            | 6,8054          | 29,004              | 21,791             | 7,2125          |                      |                       |                |                                         |
|                   |               |                       | 100%RB                    | 29,205              | 21,5048            | 7,6999          | 28,763              | 20,401             | 8,3622          |                      |                       |                |                                         |
|                   | 18900         | 1880                  | 1 RB low                  | 28,753              | 22,6885            | 6,0646          | 28,978              | 21,953             | 7,0249          | 22,689               | 22,051                |                |                                         |
|                   |               |                       | 1 RB high                 | 28,755              | 22,4949            | 6,2604          | 29,102              | 21,854             | 7,248           |                      |                       |                |                                         |
|                   |               |                       | 50%RB mid                 | 28,215              | 21,7774            | 6,4374          | 29,031              | 22,051             | 6,9805          |                      |                       |                |                                         |
|                   |               |                       | 100%RB                    | 28,599              | 21,7474            | 6,8517          | 28,645              | 20,65              | 7,9953          |                      |                       |                |                                         |
|                   | 19175         | 1907,5                | 1 RB low                  | 28,289              | 22,8007            | 5,4881          | 27,739              | 21,822             | 5,9172          | 22,801               | 21,822                |                |                                         |
|                   |               |                       | 1 RB high                 | 27,716              | 21,3312            | 6,3852          | 26,9                | 20,464             | 6,4362          |                      |                       |                |                                         |
|                   |               |                       | 50%RB mid                 | 27,773              | 21,2942            | 6,4786          | 28,067              | 21,577             | 6,4905          |                      |                       |                |                                         |
|                   |               |                       | 100%RB                    | 27,741              | 21,251             | 6,4903          | 27,8                | 20,407             | 7,3929          |                      |                       |                |                                         |
| 10 MHz            | 18650         | 1855                  | 1 RB low                  | 27,794              | 22,0713            | 5,723           | 27,798              | 20,877             | 6,9214          | 22,42                | 22,903                |                |                                         |
|                   |               |                       | 1 RB high                 | 28,356              | 22,4203            | 5,9356          | 28,527              | 21,491             | 7,0364          |                      |                       |                |                                         |
|                   |               |                       | 50%RB mid                 | 28,658              | 21,6975            | 6,9606          | 28,61               | 20,644             | 7,9653          |                      |                       |                |                                         |
|                   |               |                       | 100%RB                    | 28,82               | 21,4748            | 7,345           | 26,682              | 22,903             | 3,7797          |                      |                       |                |                                         |
|                   | 18900         | 1880                  | 1 RB low                  | 28,269              | 22,3971            | 5,8718          | 28,276              | 21,678             | 6,5982          | 22,397               | 22,498                |                |                                         |
|                   |               |                       | 1 RB high                 | 28,127              | 21,9318            | 6,1949          | 28,39               | 21,154             | 7,2365          |                      |                       |                |                                         |
|                   |               |                       | 50%RB mid                 | 28,569              | 21,7053            | 6,864           | 28,686              | 20,71              | 7,9758          |                      |                       |                |                                         |
|                   |               |                       | 100%RB                    | 28,862              | 21,4786            | 7,3838          | 26,14               | 22,498             | 3,6426          |                      |                       |                |                                         |
|                   | 19150         | 1905                  | 1 RB low                  | 27,742              | 22,014             | 5,7281          | 28,143              | 21,201             | 6,9423          | 22,014               | 21,795                |                |                                         |
|                   |               |                       | 1 RB high                 | 26,501              | 20,8109            | 5,6905          | 27,397              | 20,123             | 7,2735          |                      |                       |                |                                         |
|                   |               |                       | 50%RB mid                 | 27,832              | 21,4703            | 6,362           | 27,91               | 20,606             | 7,3033          |                      |                       |                |                                         |
|                   |               |                       | 100%RB                    | 28,489              | 21,181             | 7,3084          | 25,979              | 21,795             | 4,1836          |                      |                       |                |                                         |
| 15 MHz            | 18675         | 1857,5                | 1 RB low                  | 27,803              | 22,0239            | 5,7792          | 28,009              | 21,176             | 6,8338          | 22,596               | 23,046                |                |                                         |
|                   |               |                       | 1 RB high                 | 28,296              | 22,5958            | 5,7             | 28,555              | 21,852             | 6,703           |                      |                       |                |                                         |
|                   |               |                       | 50%RB mid                 | 28,863              | 22,2335            | 6,6296          | 29,504              | 22,519             | 6,9844          |                      |                       |                |                                         |
|                   |               |                       | 100%RB                    | 28,729              | 21,8524            | 6,8764          | 26,849              | 23,046             | 3,8036          |                      |                       |                |                                         |
|                   | 18900         | 1880                  | 1 RB low                  | 28,408              | 22,7572            | 5,6506          | 28,449              | 21,81              | 6,6396          | 22,757               | 22,491                |                |                                         |
|                   |               |                       | 1 RB high                 | 28,097              | 21,9681            | 6,1284          | 28,649              | 20,913             | 7,7354          |                      |                       |                |                                         |
|                   |               |                       | 50%RB mid                 | 28,774              | 22,114             | 6,6598          | 29,039              | 22,353             | 6,6864          |                      |                       |                |                                         |
|                   |               |                       | 100%RB                    | 28,827              | 21,7261            | 7,1011          | 26,231              | 22,491             | 3,74            |                      |                       |                |                                         |
|                   | 19125         | 1902,5                | 1 RB low                  | 28,469              | 21,831             | 6,6379          | 28,696              | 20,954             | 7,7418          | 22,219               | 22,483                |                |                                         |
|                   |               |                       | 1 RB high                 | 27,225              | 21,0756            | 6,1494          | 27,448              | 20,513             | 6,935           |                      |                       |                |                                         |
|                   |               |                       | 50%RB mid                 | 28,467              | 22,2185            | 6,2482          | 28,747              | 22,483             | 6,2643          |                      |                       |                |                                         |
|                   |               |                       | 100%RB                    | 28,366              | 21,6475            | 6,7185          | 29,01               | 21,55              | 7,46            |                      |                       |                |                                         |
| 20 MHz            | 18700         | 1860                  | 1 RB low                  | 28,477              | 23,1704            | 5,307           | 28,327              | 22,304             | 6,023           | 23,776               | 23,858                |                |                                         |
|                   |               |                       | 1 RB high                 | 28,808              | 23,7758            | 5,032           | 28,813              | 22,96              | 5,8534          |                      |                       |                |                                         |
|                   |               |                       | 50%RB mid                 | 29,143              | 22,0697            | 7,0737          | 28,962              | 22,127             | 6,8358          |                      |                       |                |                                         |
|                   |               |                       | 100%RB                    | 29,386              | 22,0996            | 7,2867          | 27,575              | 23,858             | 3,7172          |                      |                       |                |                                         |
|                   | 18900         | 1880                  | 1 RB low                  | 28,938              | 23,8166            | 5,1216          | 28,789              | 23,162             | 5,6272          | 23,817               | 23,683                |                |                                         |
|                   |               |                       | 1 RB high                 | 28,849              | 22,9582            | 5,8905          | 28,416              | 22,211             | 6,205           |                      |                       |                |                                         |
|                   |               |                       | 50%RB mid                 | 28,799              | 21,7449            | 7,0539          | 29,196              | 21,88              | 7,316           |                      |                       |                |                                         |
|                   |               |                       | 100%RB                    | 29,026              | 21,8545            | 7,1713          | 27,37               | 23,683             | 3,6872          |                      |                       |                |                                         |
|                   | 19100         | 1900                  | 1 RB low                  | 28,946              | 22,7781            | 6,168           | 28,365              | 22,079             | 6,2861          | 22,778               | 22,838                |                |                                         |
|                   |               |                       | 1 RB high                 | 27,316              | 22,0309            | 5,2854          | 27,485              | 21,536             | 5,9484          |                      |                       |                |                                         |
|                   |               |                       | 50%RB mid                 | 28,507              | 21,6409            | 6,866           | 28,727              | 21,746             | 6,9806          |                      |                       |                |                                         |
|                   |               |                       | 100%RB                    | 28,774              | 21,5942            | 7,1798          | 26,945              | 22,838             | 4,1068          |                      |                       |                |                                         |

### 1.3. Power conducted LTE-Band 12

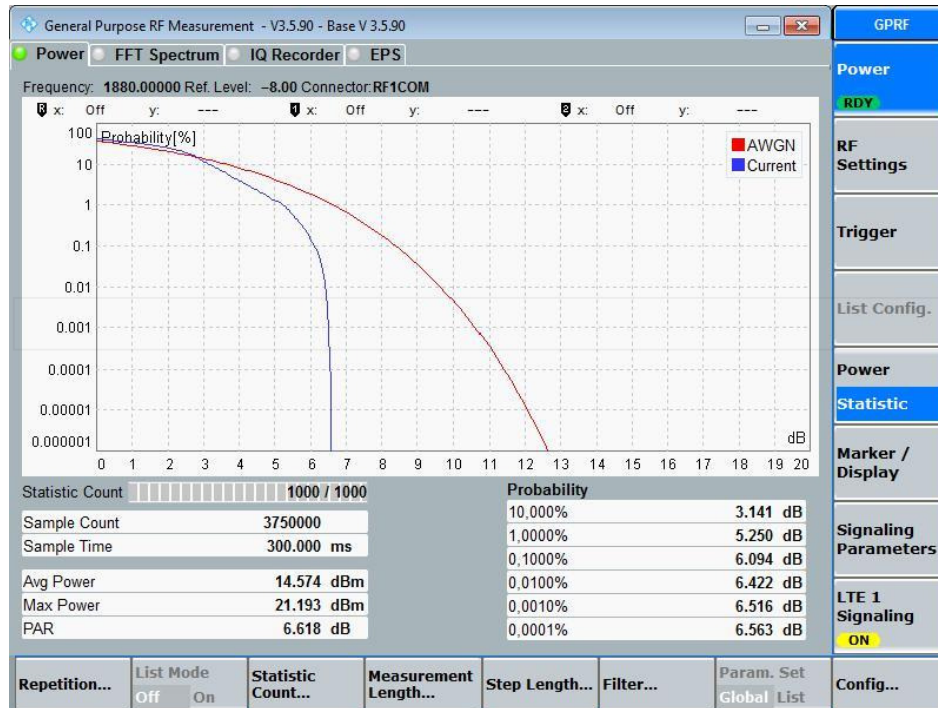
| LTE-Band 12       |               |                       |                           | QPSK-Modulation     |                    |                 | 16-QAM-Modulation   |                    |                 | max- modulation QPSK | max. modulation 16-QAM | max. channel | absolute max. value |
|-------------------|---------------|-----------------------|---------------------------|---------------------|--------------------|-----------------|---------------------|--------------------|-----------------|----------------------|------------------------|--------------|---------------------|
| channel bandwidth | ARFCN ch. no. | ARFCN-Frequency [MHz] | Resource block allocation | Peak detektor [dBm] | RMS detektor [dBm] | PAR Faktor [dB] | Peak detektor [dBm] | RMS detektor [dBm] | PAR Faktor [dB] |                      |                        |              |                     |
| 5 MHz             | 23035         |                       | 1 RB low                  | 28,024              | 23,3642            | 4,6597          | 28,237              | 22,439             | 5,7973          | 23,36                | 22,44                  | 23,36        |                     |
|                   |               |                       | 1 RB high                 | 27,711              | 22,6394            | 5,0717          | 28,001              | 21,806             | 6,1943          |                      |                        |              |                     |
|                   |               |                       | 50%RB mid                 | 28,388              | 21,585             | 6,803           | 29,042              | 20,515             | 8,527           |                      |                        |              |                     |
|                   |               |                       | 100%RB                    | 27,459              | 21,698             | 5,761           | 28,357              | 20,746             | 7,611           |                      |                        |              |                     |
|                   | 23095         |                       | 1 RB low                  | 28,08               | 22,54              | 5,5401          | 28,213              | 21,616             | 6,5974          | 23,22                | 22,43                  |              |                     |
|                   |               |                       | 1 RB high                 | 28,546              | 23,2168            | 5,3293          | 28,765              | 22,429             | 6,3361          |                      |                        |              |                     |
|                   |               |                       | 50%RB mid                 | 28,857              | 21,769             | 7,088           | 29,297              | 20,833             | 8,464           |                      |                        |              |                     |
|                   |               |                       | 100%RB                    | 28,875              | 21,764             | 7,111           | 29,47               | 20,85              | 8,62            |                      |                        |              |                     |
|                   | 23155         |                       | 1 RB low                  | 28,546              | 23,1822            | 5,3637          | 28,098              | 22,344             | 5,7535          | 23,18                | 22,34                  |              |                     |
|                   |               |                       | 1 RB high                 | 28,012              | 22,4875            | 5,5246          | 27,503              | 21,64              | 5,8629          |                      |                        |              |                     |
|                   |               |                       | 50%RB mid                 | 28,266              | 21,597             | 6,669           | 28,517              | 20,719             | 7,798           |                      |                        |              |                     |
|                   |               |                       | 100%RB                    | 28,714              | 21,681             | 7,033           | 28,884              | 20,74              | 8,144           |                      |                        |              |                     |
| 10 MHz            | 23060         |                       | 1 RB low                  | 27,947              | 22,8239            | 5,1229          | 27,945              | 21,802             | 6,143           | 22,82                | 23,44                  | 23,44        |                     |
|                   |               |                       | 1 RB high                 | 28,294              | 22,7271            | 5,5671          | 28,293              | 21,665             | 6,6283          |                      |                        |              |                     |
|                   |               |                       | 50%RB mid                 | 28,747              | 21,3796            | 7,3674          | 28,26               | 20,383             | 7,877           |                      |                        |              |                     |
|                   |               |                       | 100%RB                    | 28,366              | 21,5553            | 6,8107          | 26,818              | 23,435             | 3,3823          |                      |                        |              |                     |
|                   | 23095         |                       | 1 RB low                  | 27,841              | 22,1961            | 5,6448          | 28,436              | 21,23              | 7,206           | 22,76                | 23,18                  |              |                     |
|                   |               |                       | 1 RB high                 | 28,103              | 22,7648            | 5,3379          | 28,107              | 21,711             | 6,3965          |                      |                        |              |                     |
|                   |               |                       | 50%RB mid                 | 29,083              | 21,752             | 7,331           | 28,727              | 20,808             | 7,919           |                      |                        |              |                     |
|                   |               |                       | 100%RB                    | 28,819              | 21,706             | 7,1129          | 26,553              | 23,176             | 3,3777          |                      |                        |              |                     |
|                   | 23130         |                       | 1 RB low                  | 28,594              | 22,407             | 6,1874          | 28,758              | 21,814             | 6,944           | 22,41                | 22,78                  |              |                     |
|                   |               |                       | 1 RB high                 | 27,924              | 22,038             | 5,886           | 26,715              | 20,613             | 6,1025          |                      |                        |              |                     |
|                   |               |                       | 50%RB mid                 | 28,913              | 22,015             | 6,898           | 29,104              | 21,045             | 8,059           |                      |                        |              |                     |
|                   |               |                       | 100%RB                    | 28,988              | 21,813             | 7,175           | 26,247              | 22,785             | 3,4624          |                      |                        |              |                     |

## 1.4. PAPR-Value (CCDF plots)

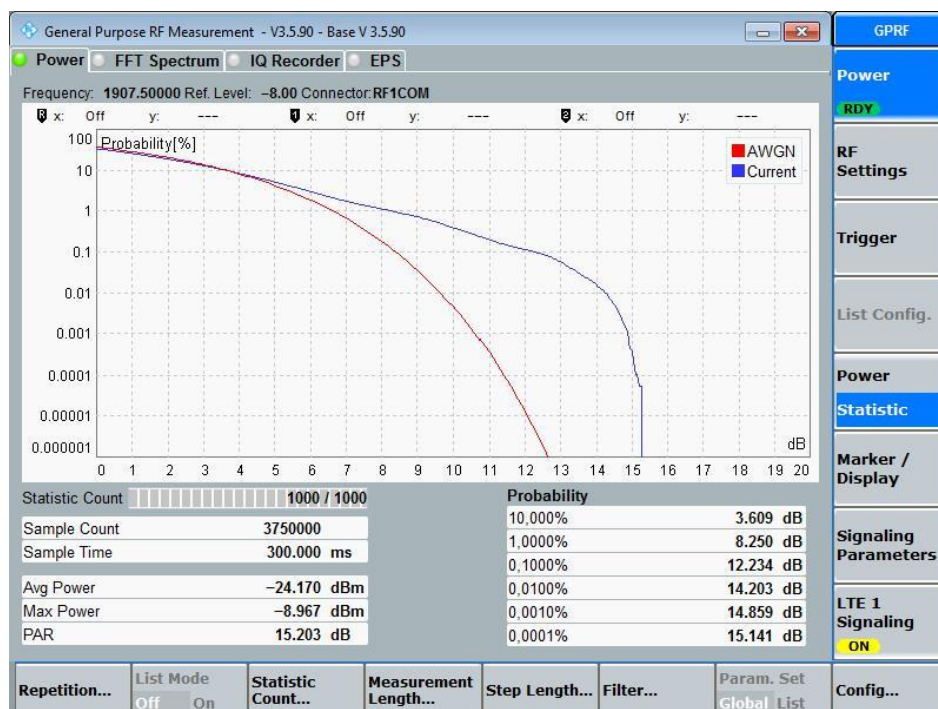
### 1.4.1. LTE Band 2

Worst-Case of each maximum Peak to Average power value was tested with the CCDF method

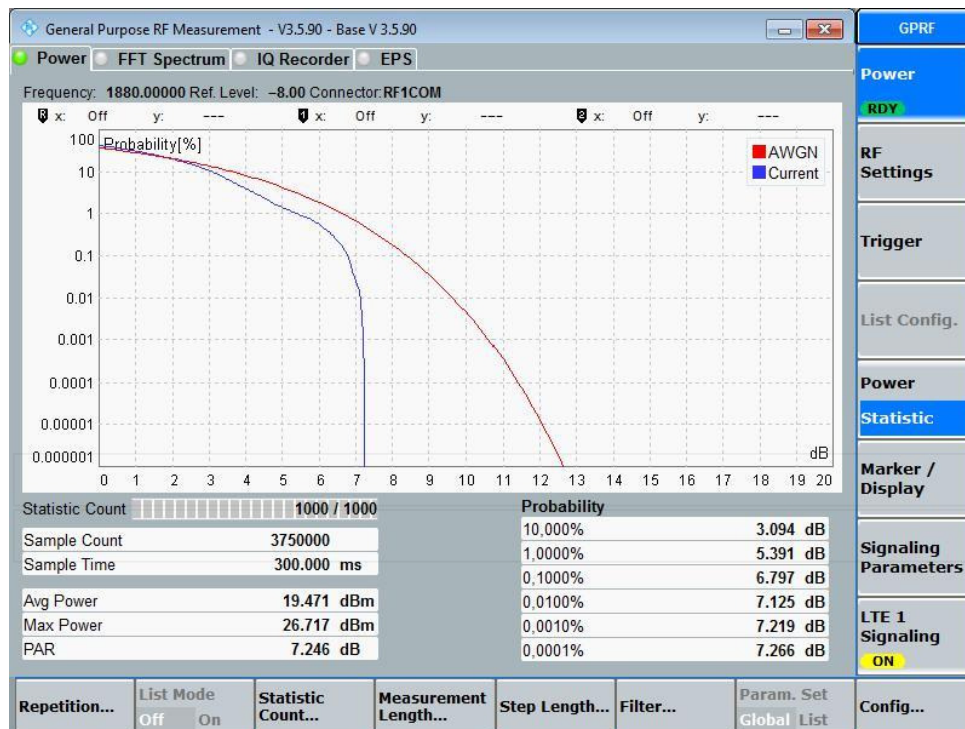
#### 1.4.1.1. 5MHz signal bandwidth



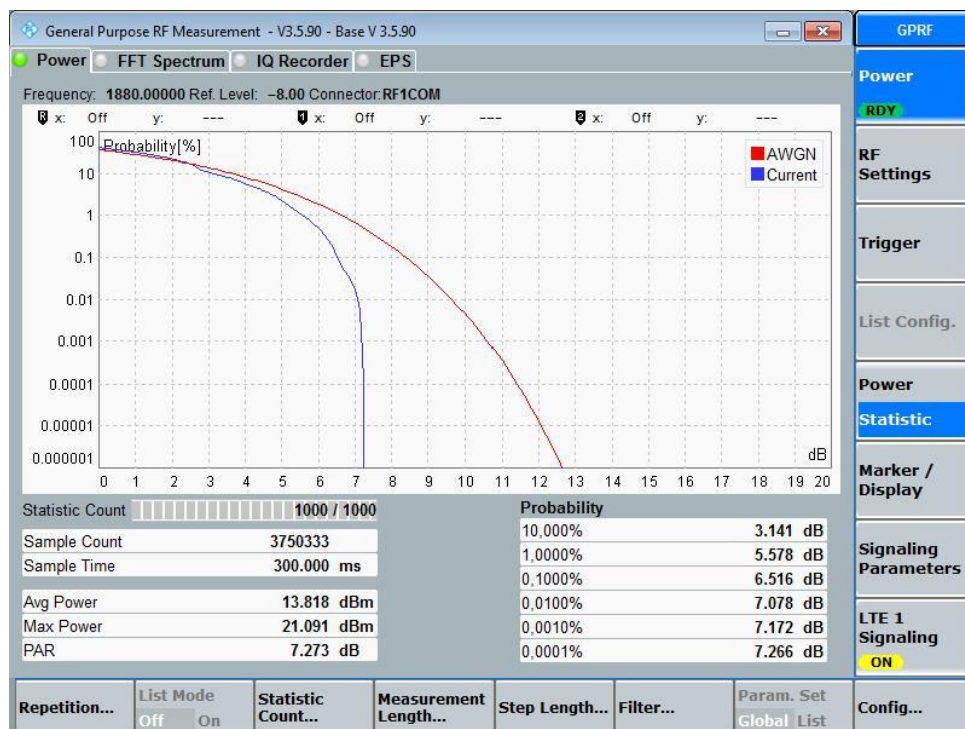
QPSK, Ch18900, 100% RB



QPSK, Ch19175, 1RBlow

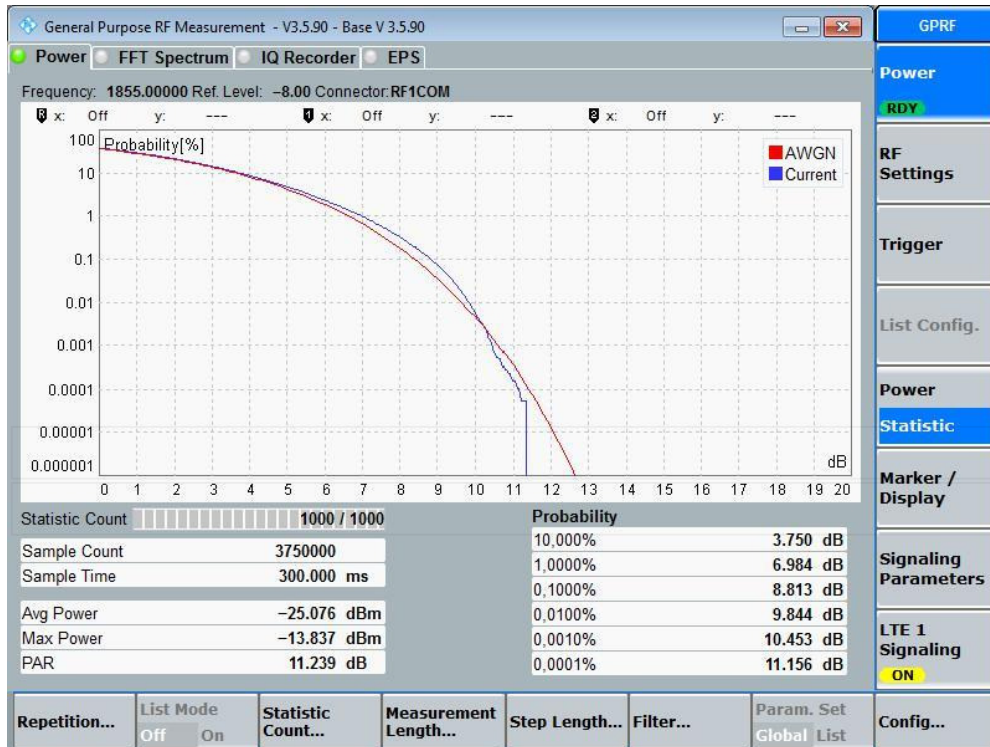


16-QAM, Ch18900, 50%RB

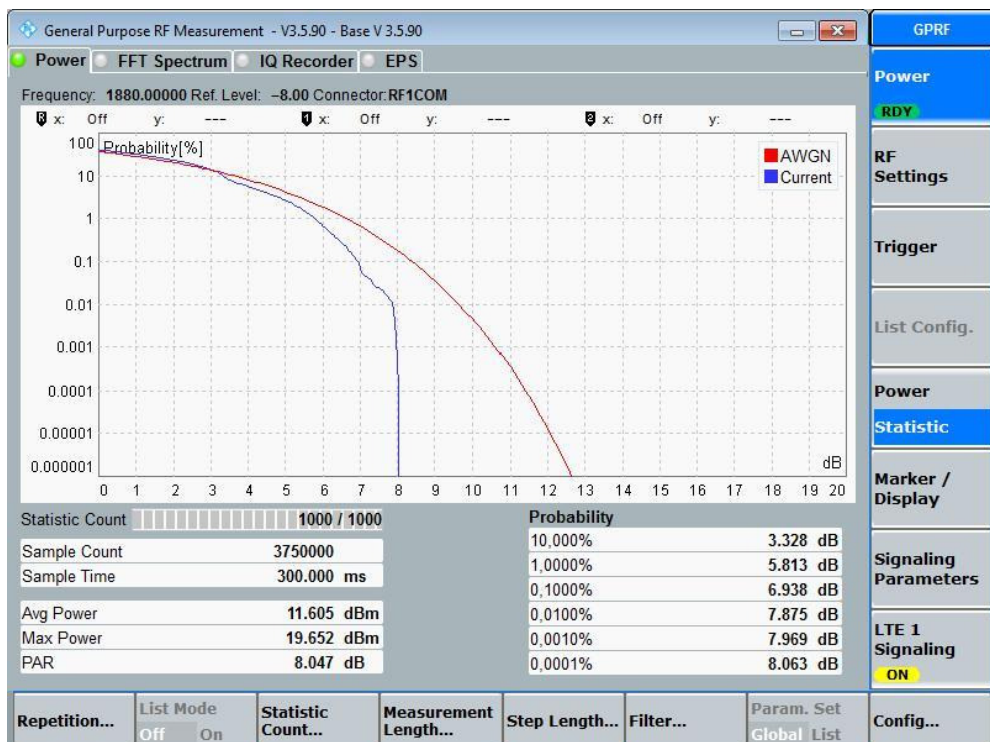


16-QAM, Ch18900, 100%RB

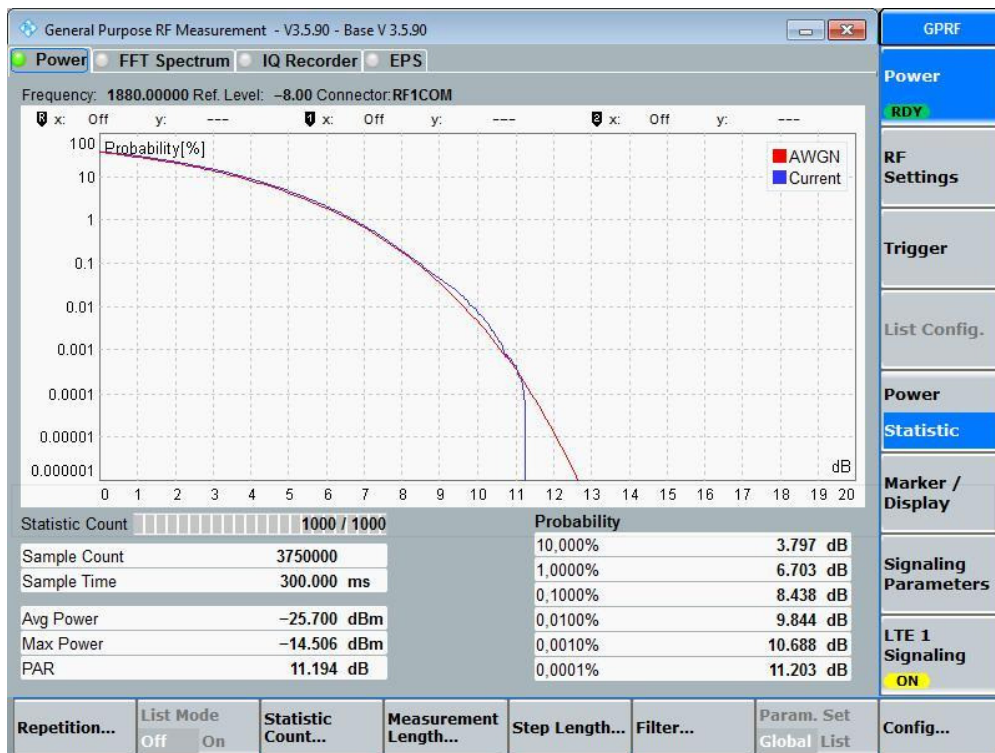
## 1.4.1.2. 10MHz signal bandwidth



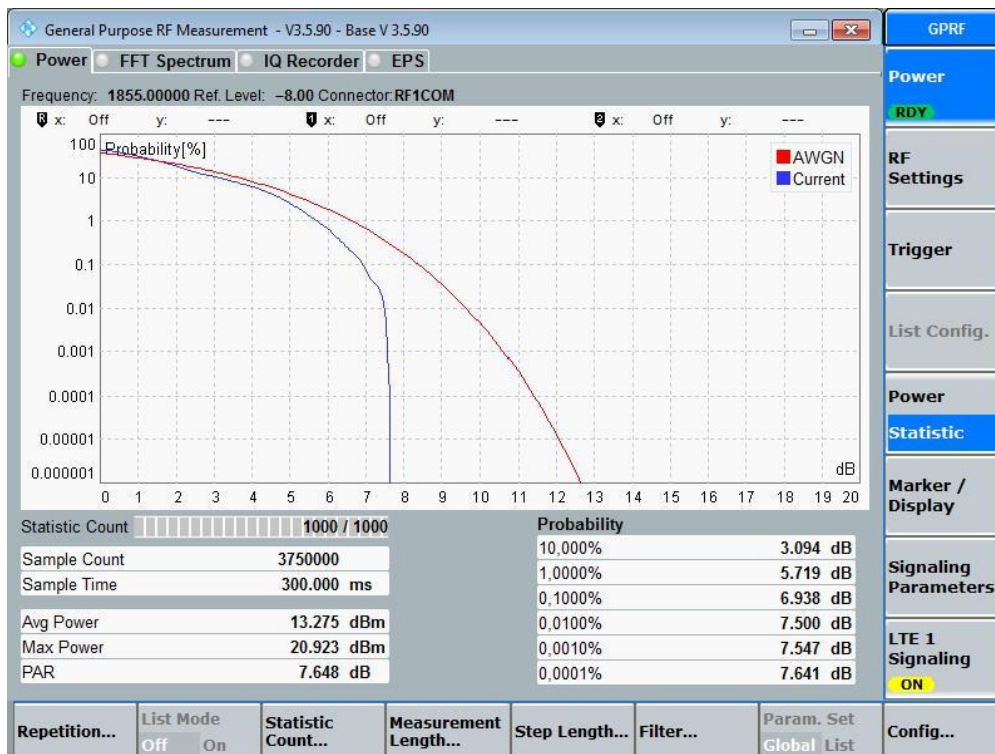
QPSK, Ch18650, 1RBhigh



QPSK, Ch18900, 100%RB

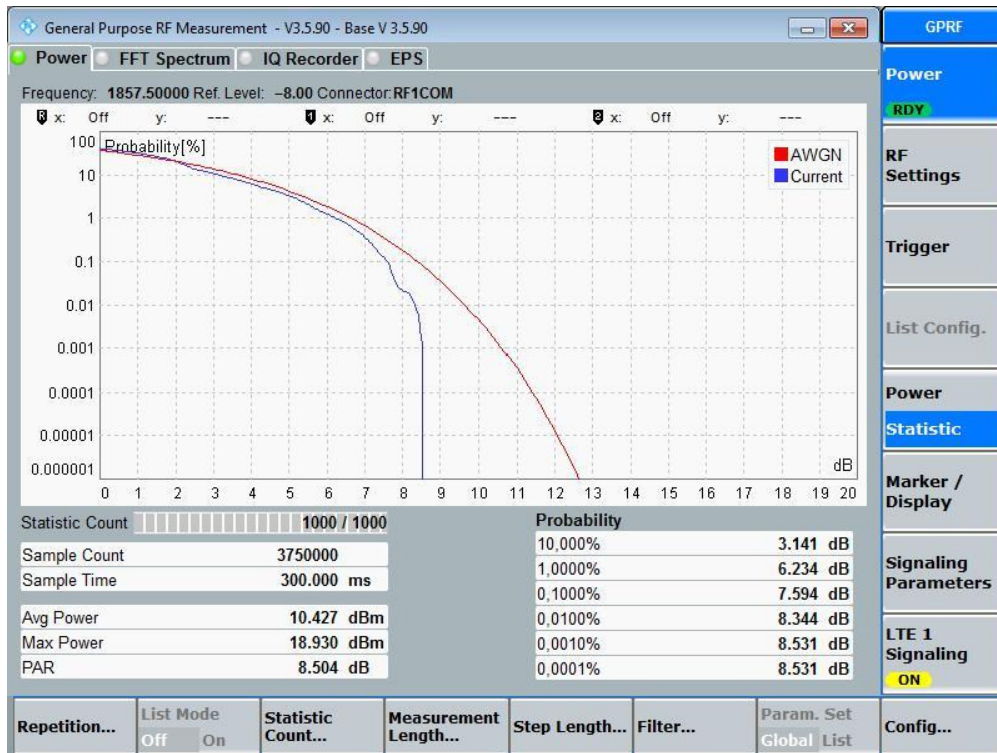


16-QAM, Ch18900, 1 RB low

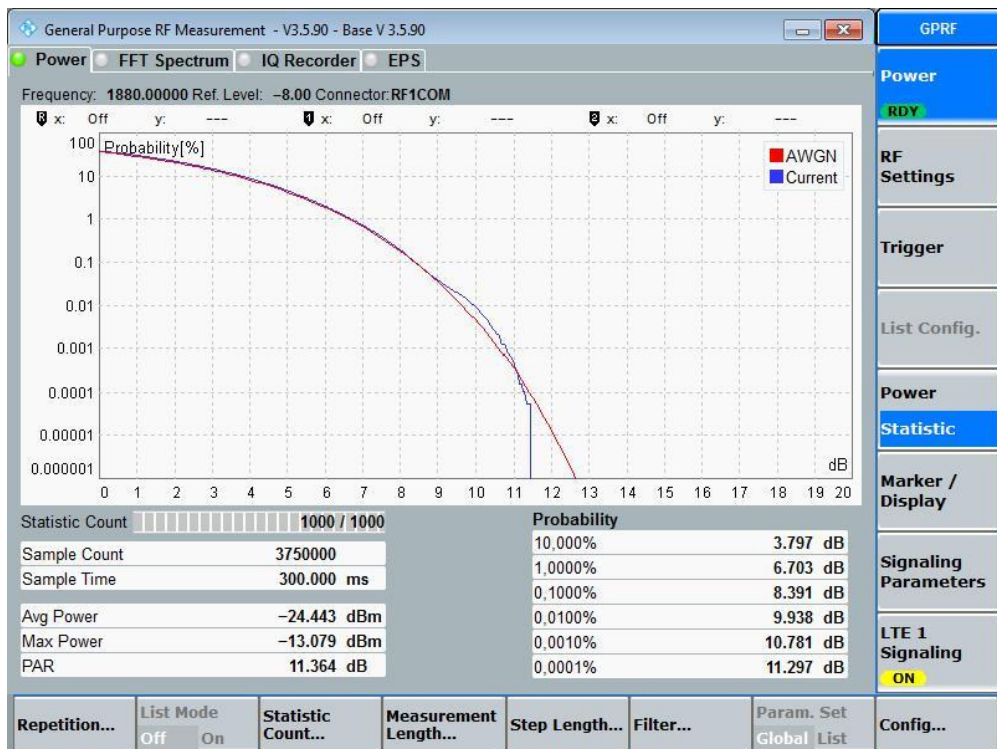


16-QAM, Ch18650, 100%RB

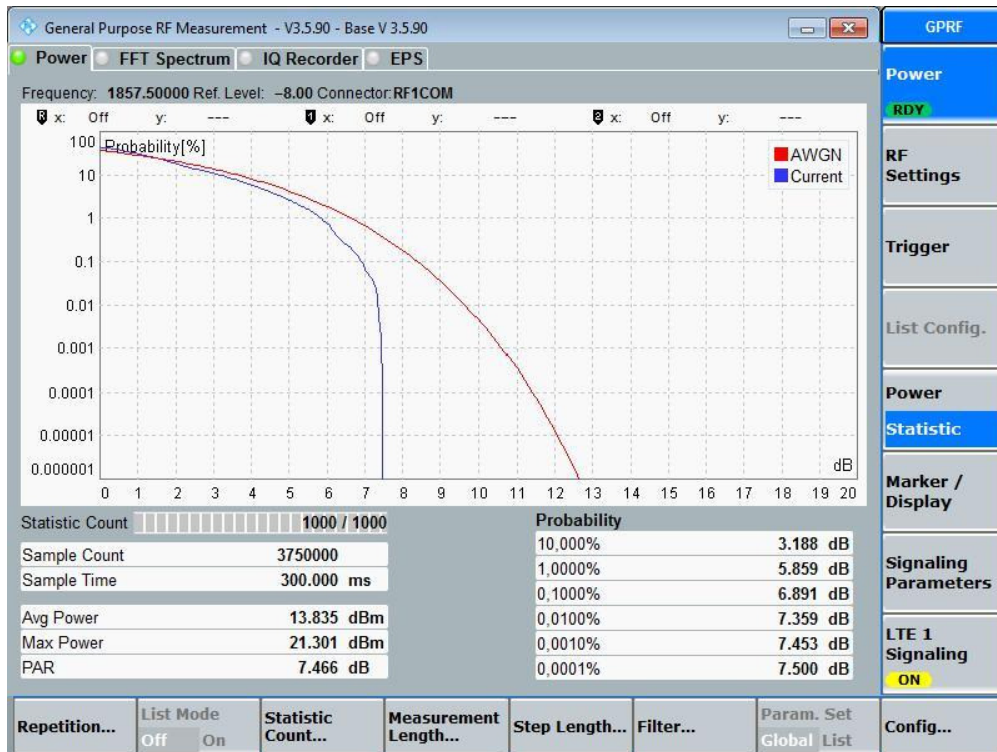
## 1.4.1.3. 15MHz signal bandwidth



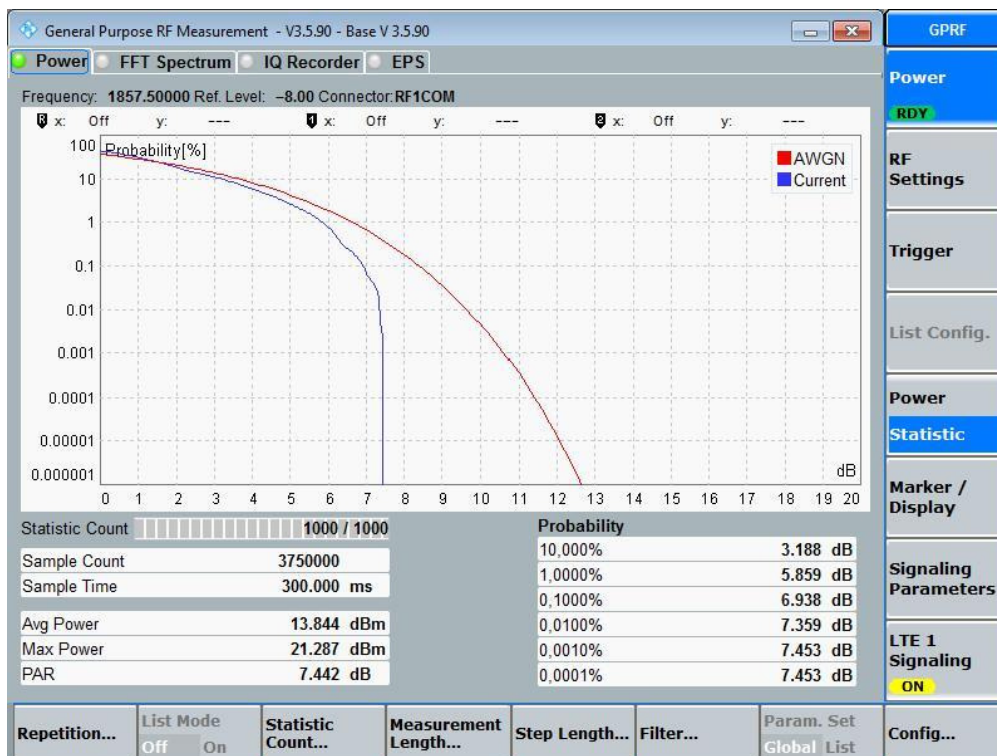
QPSK, Ch18675, 100% RB



QPSK, Ch18900, 1 RB low

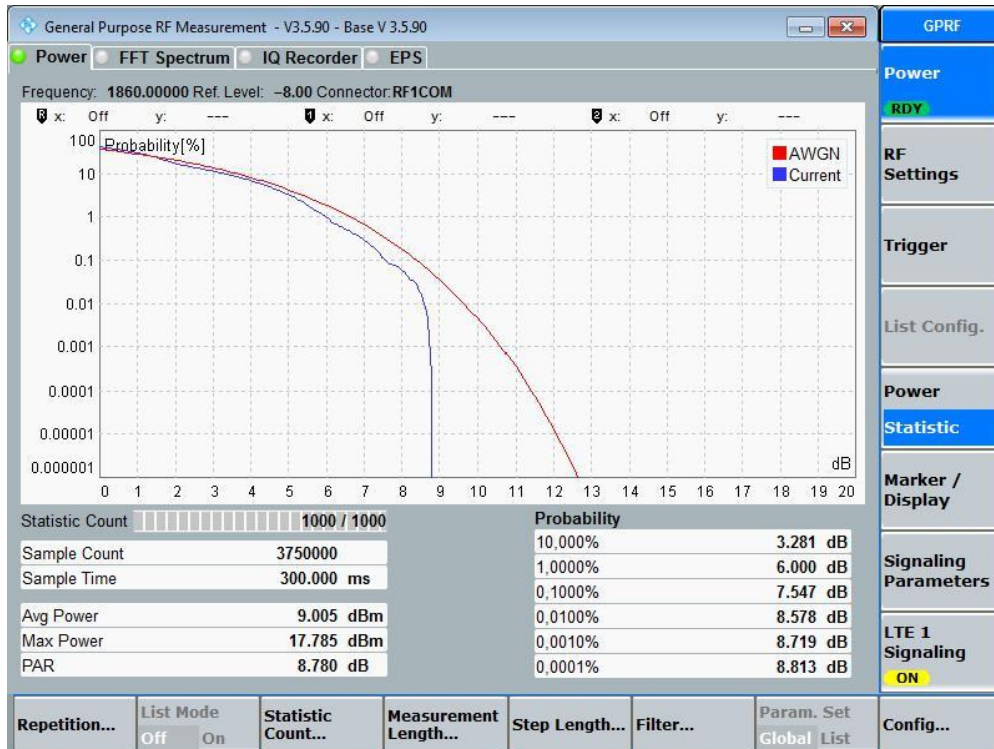


16-QAM, Ch18675, 50% RB

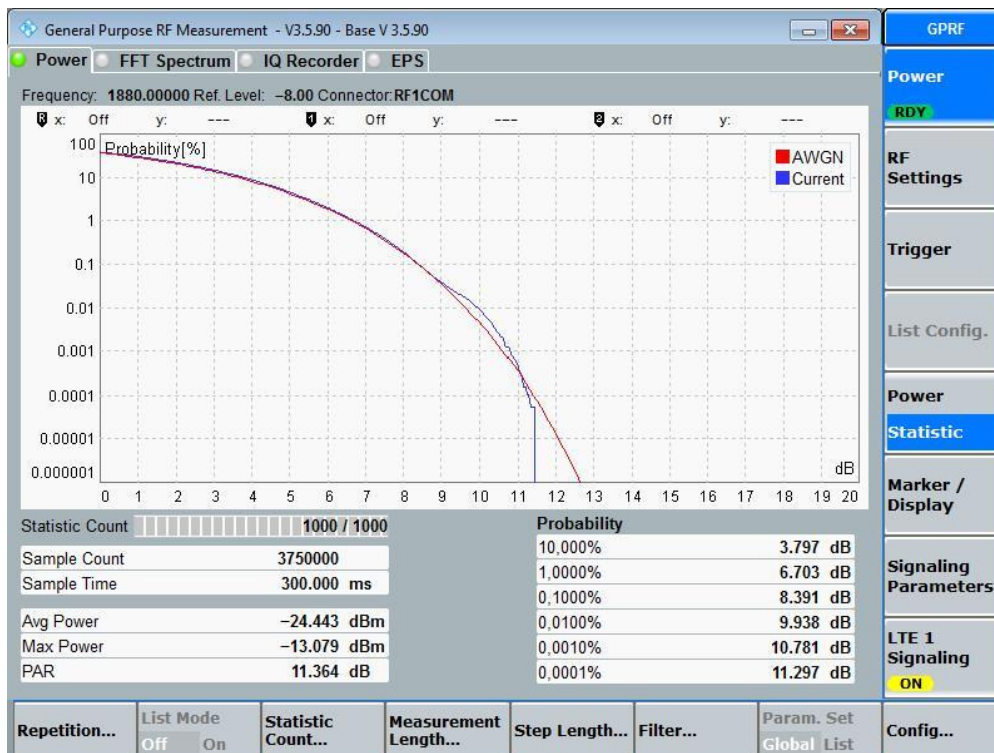


16-QAM, Ch18675, 100% RB

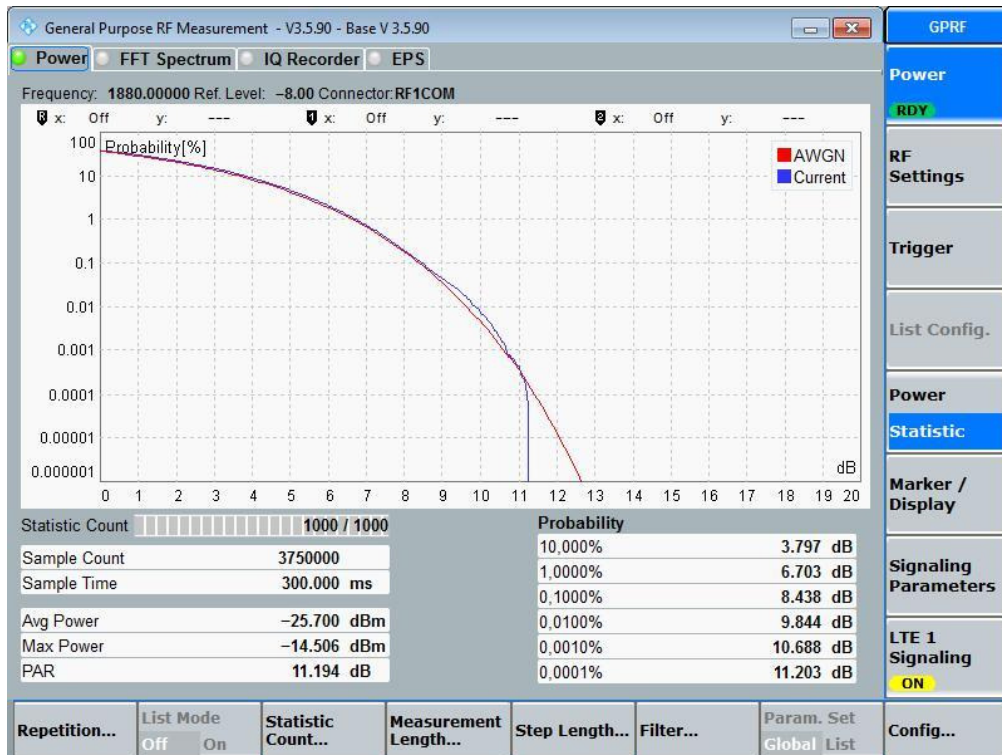
#### 1.4.1.4. 20MHz signal bandwidth



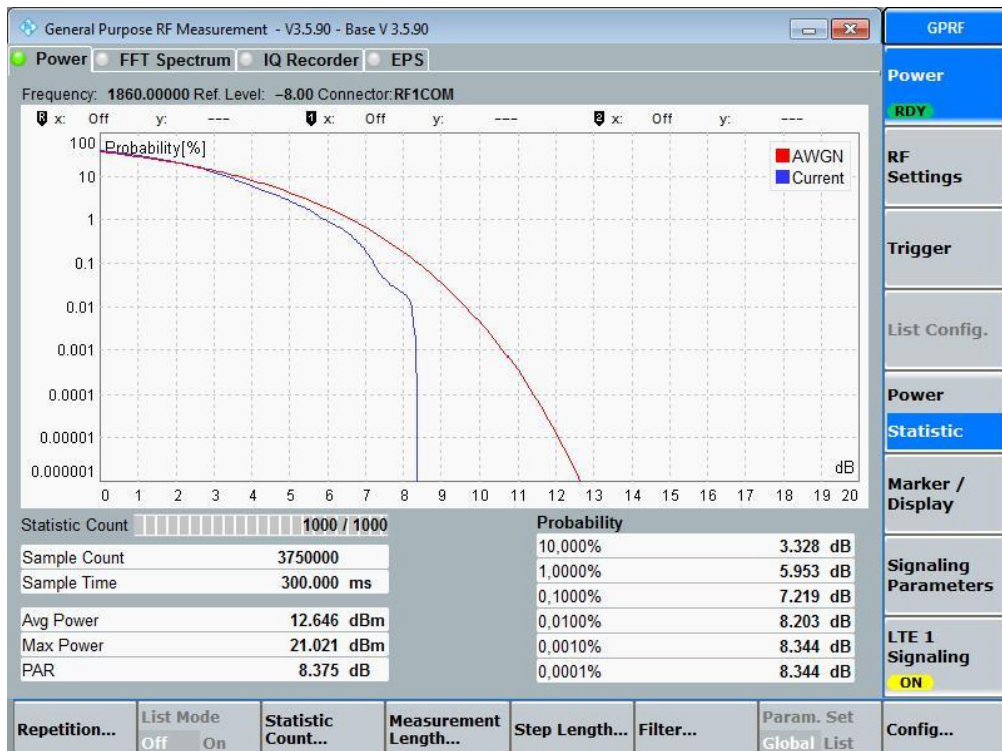
QPSK, Ch18700, 100% RB



QPSK, Ch18900, 1 RB low



16-QAM, Ch18900, 1 RB low

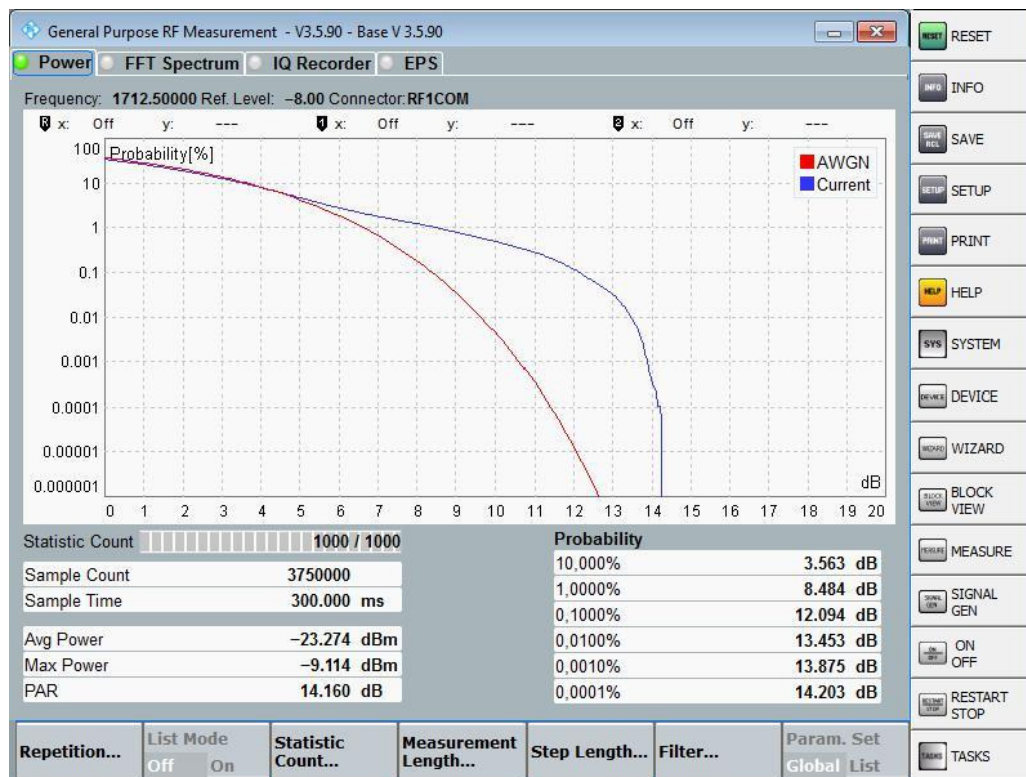


16-QAM, Ch18700, 100%RB

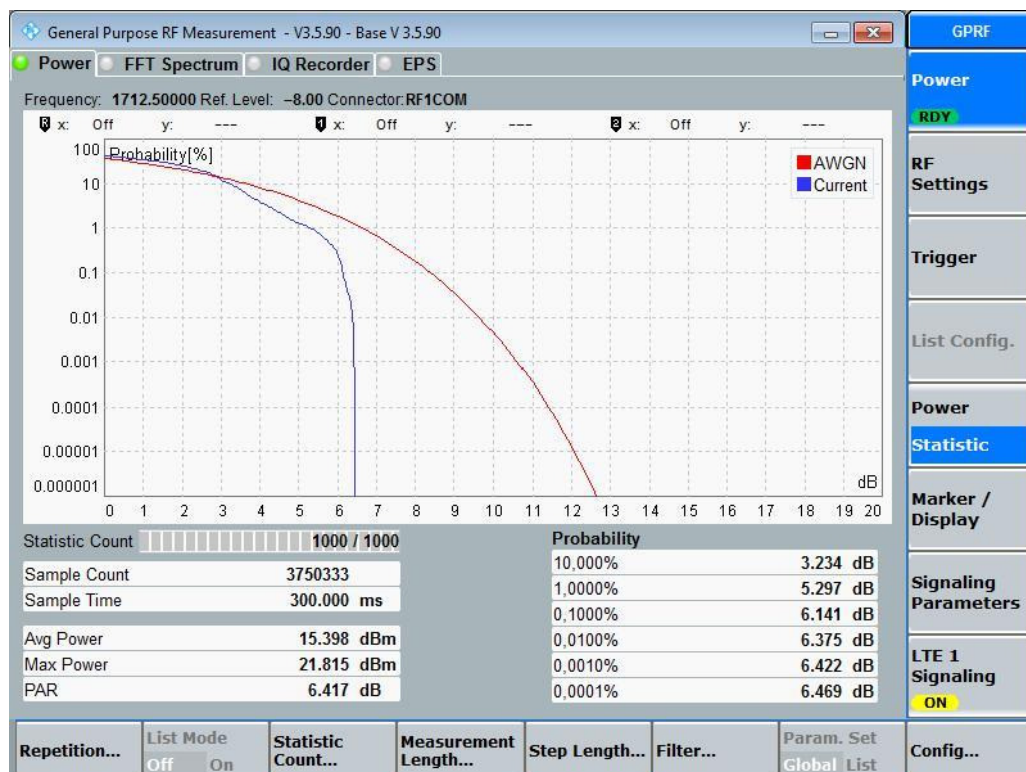
## 1.4.2. LTE Band 4

Worst-Case of each maximum Peak to Average power value was tested with the CCDF method

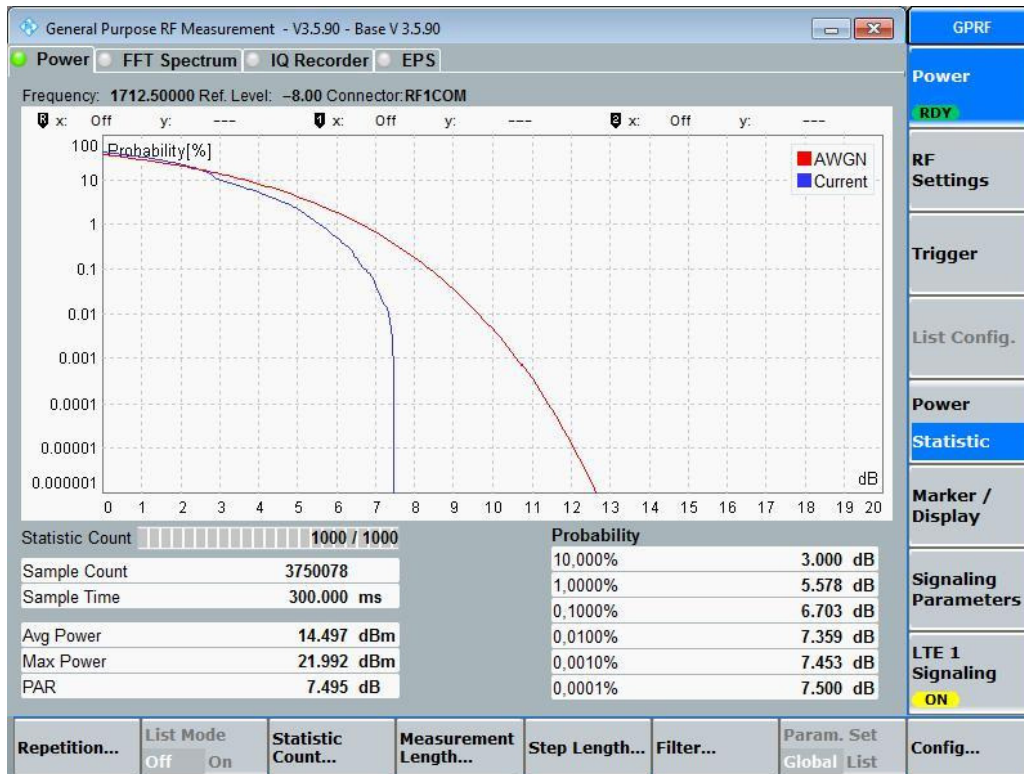
### 1.4.2.1. 5MHz signal bandwidth



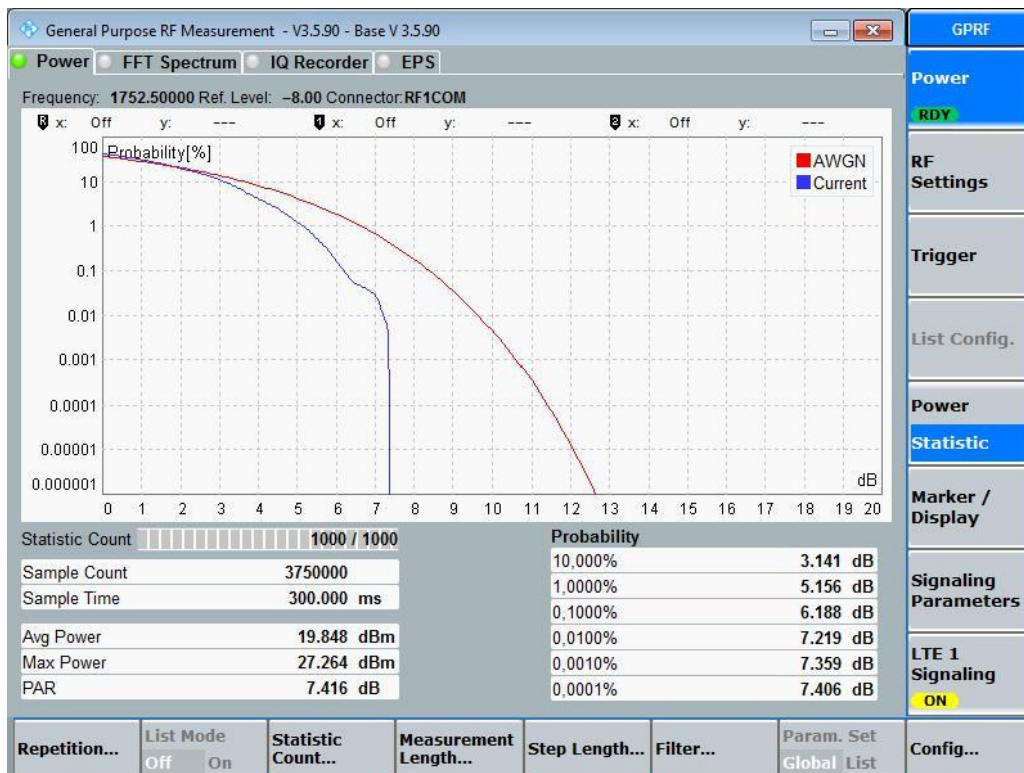
QPSK, 19975, 1 RB low



QPSK, Ch19975, 100% RB

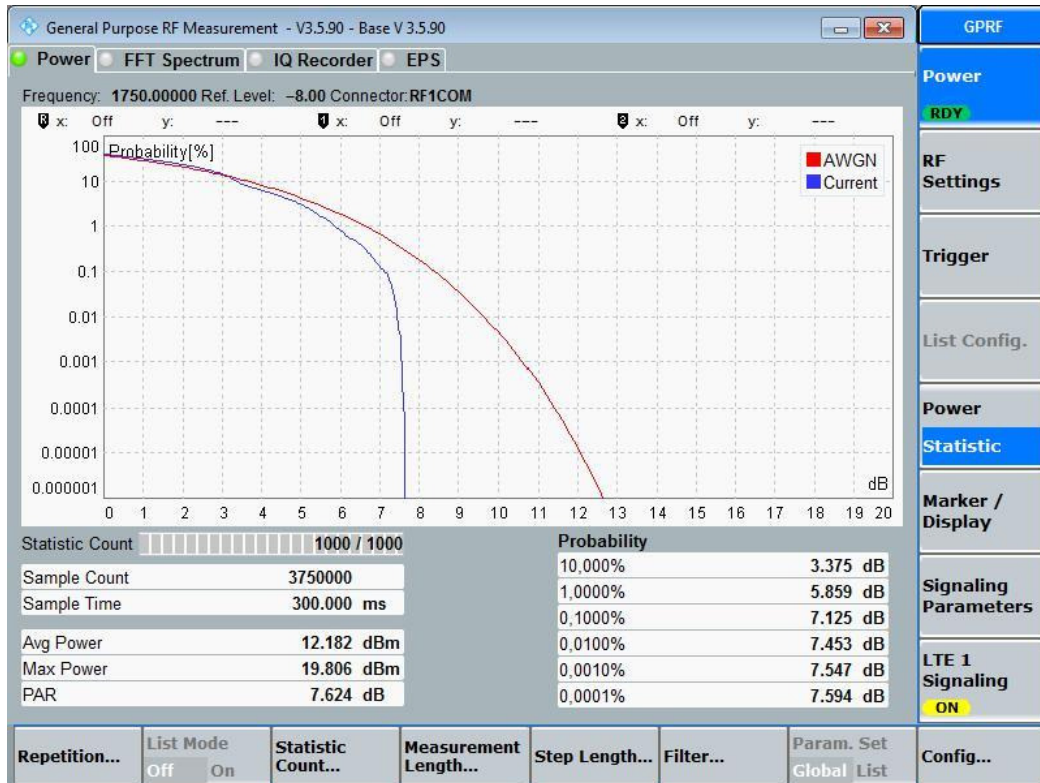


16-QAM, Ch19975, 100% RB

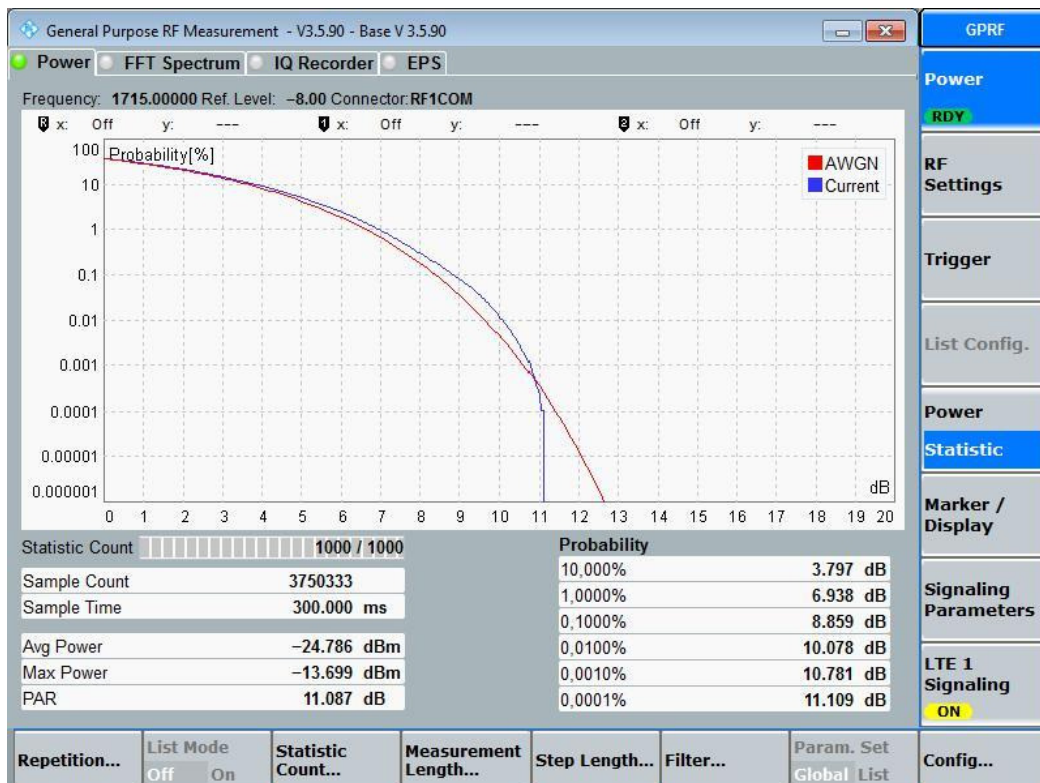


16-QAM, Ch20375, 50% RB

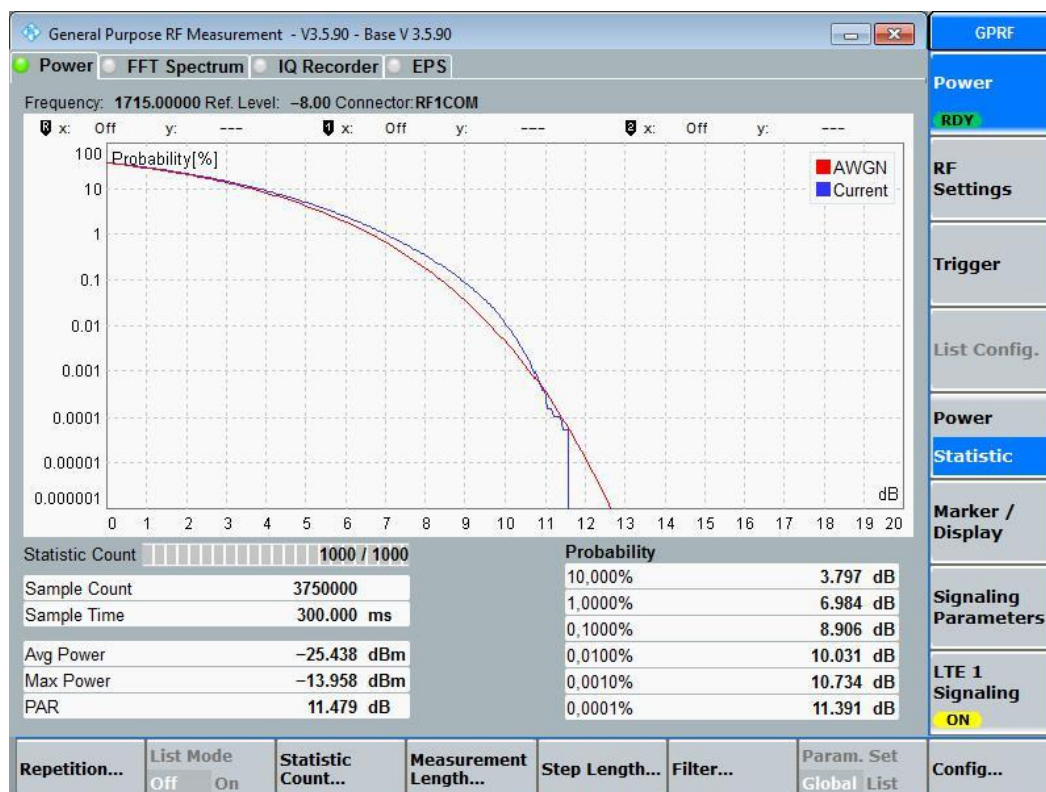
## 1.4.2.2. 10MHz signal bandwidth



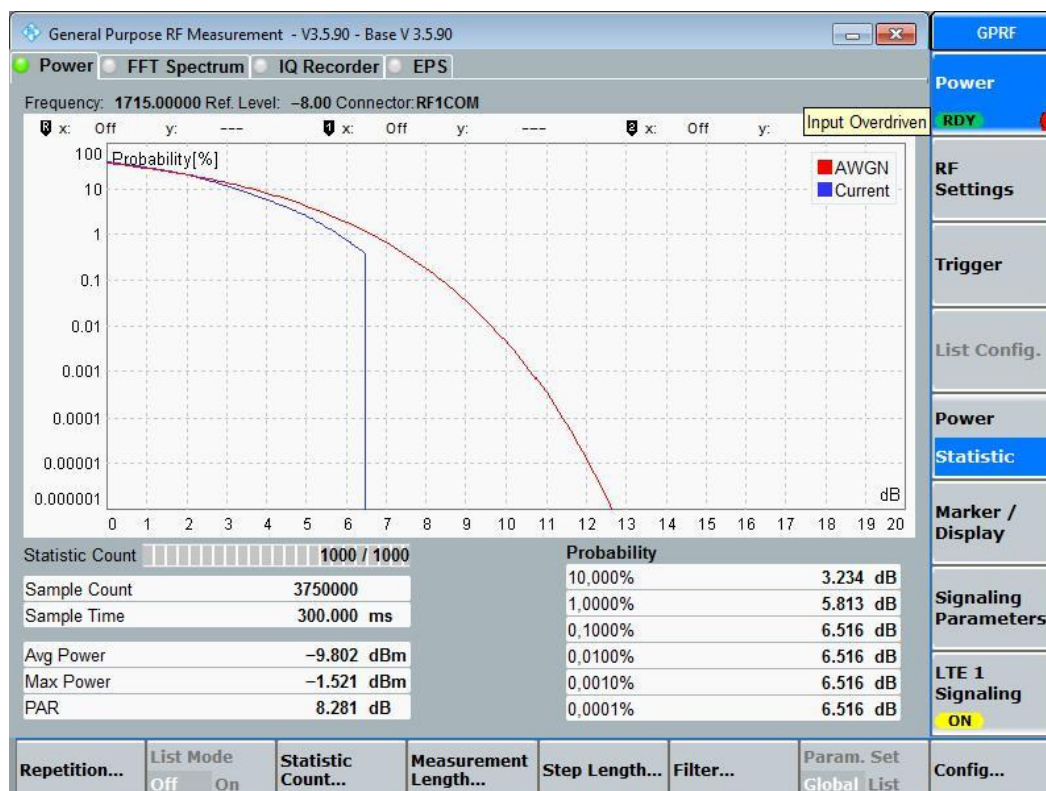
QPSK, Ch20350, 100% RB



QPSK, Ch20000, 1 RB low

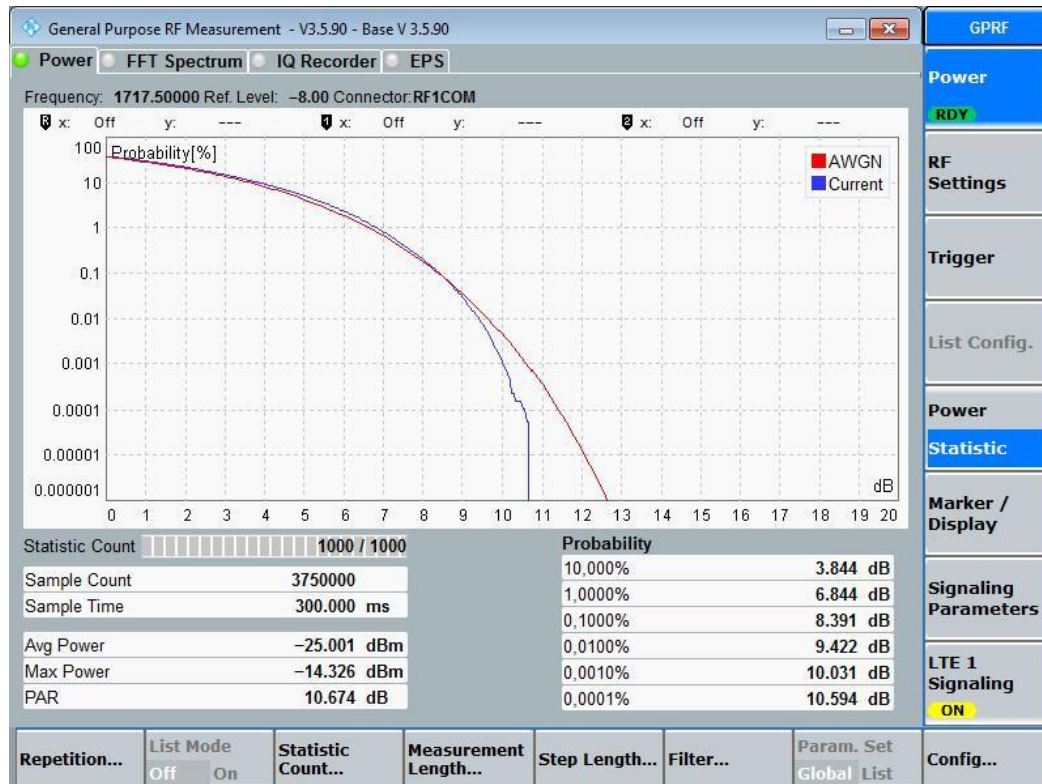


16-QAM, Ch20000, 1 RB low

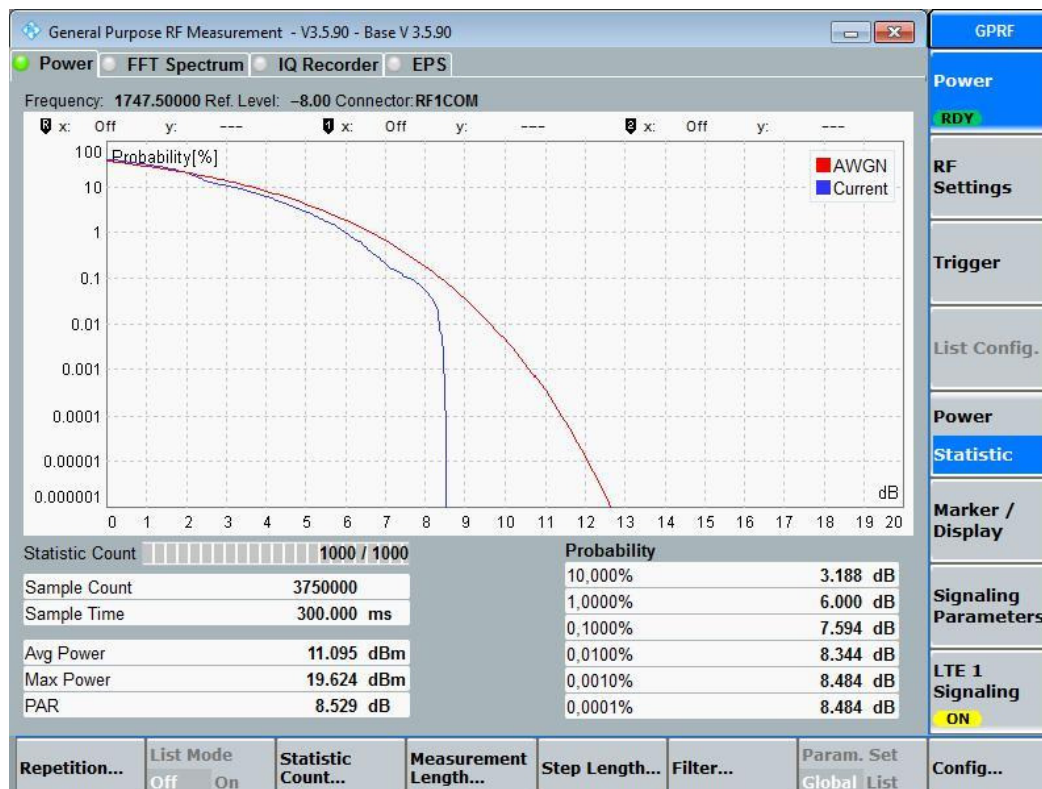


16-QAM, Ch20000, 100% RB

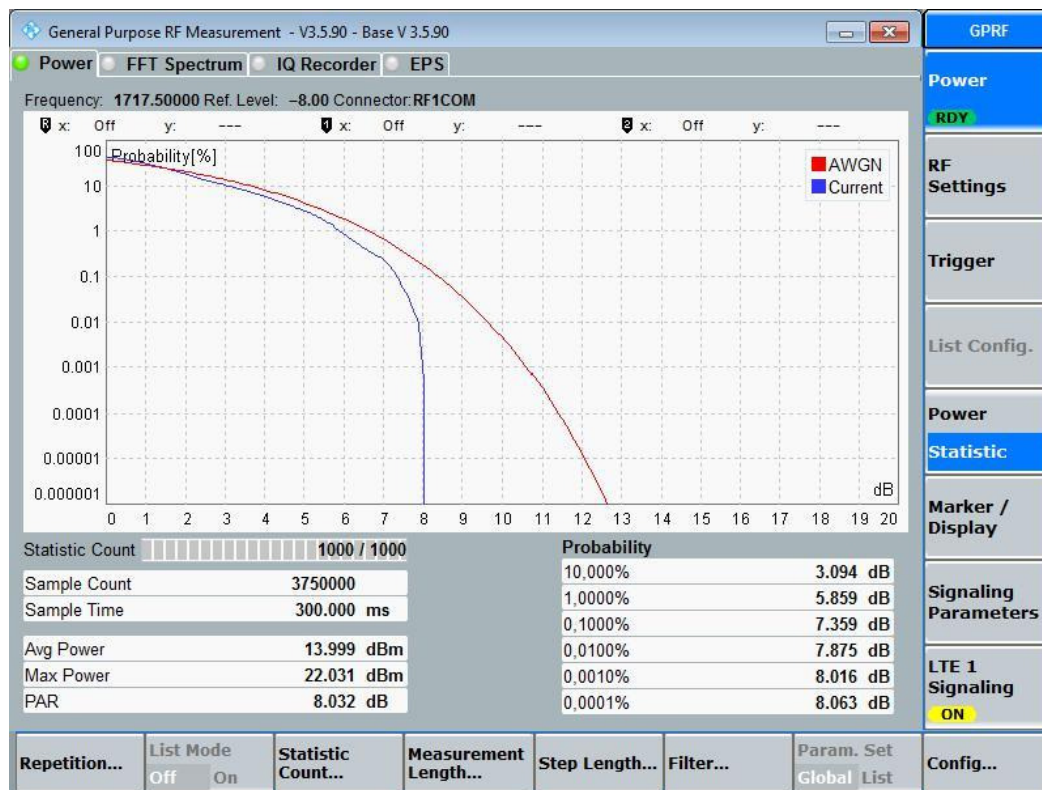
## 1.4.2.3. 15MHz signal bandwidth



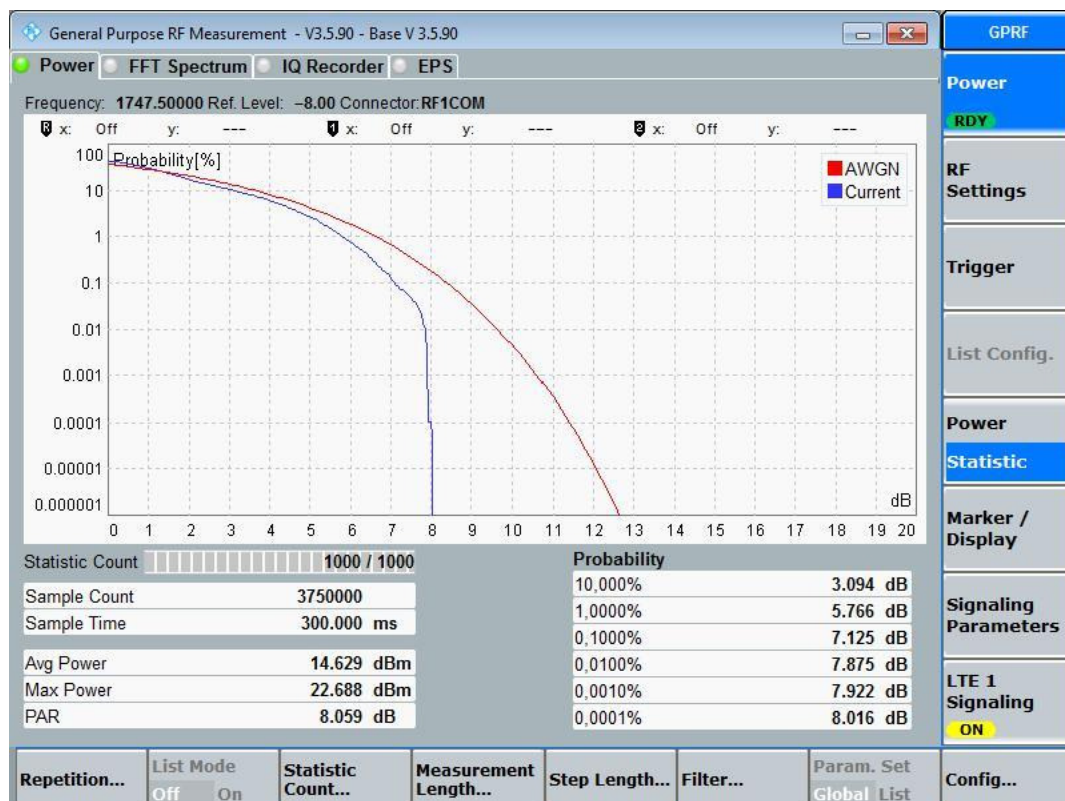
QPSK, Ch20025, 1 RB low



QPSK, Ch20325, 100% RB

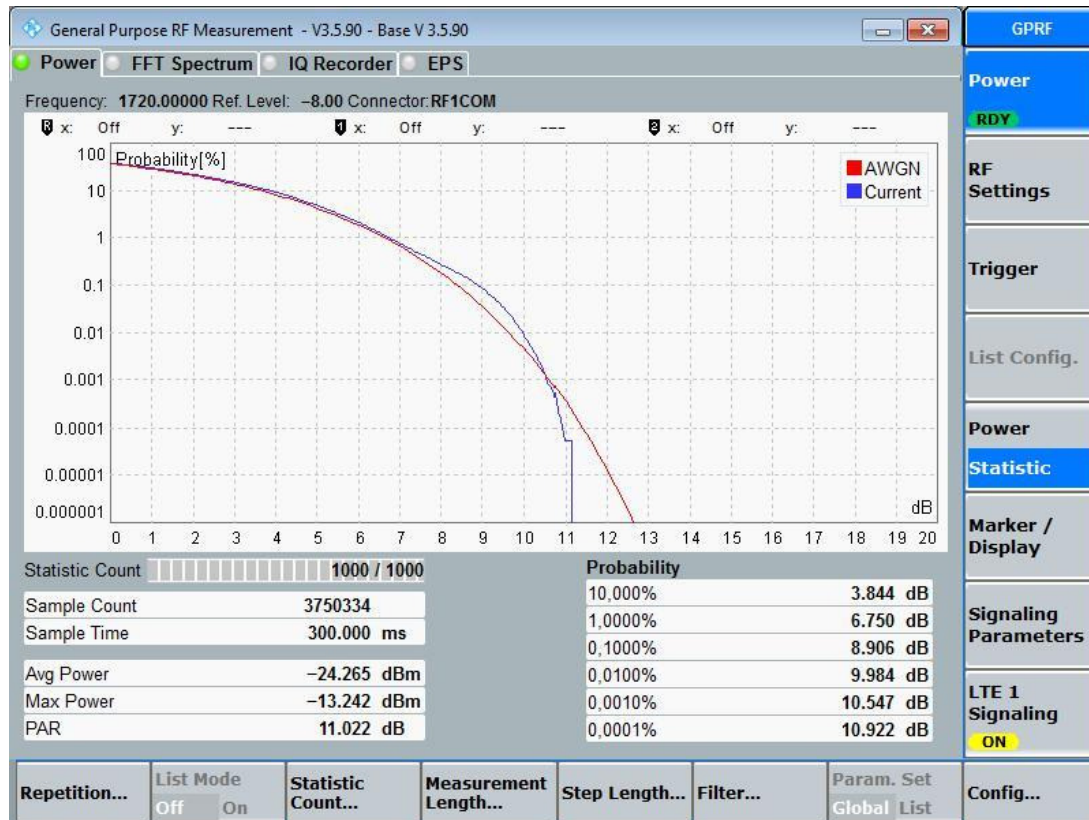


16-QAM, Ch20025, 100% RB

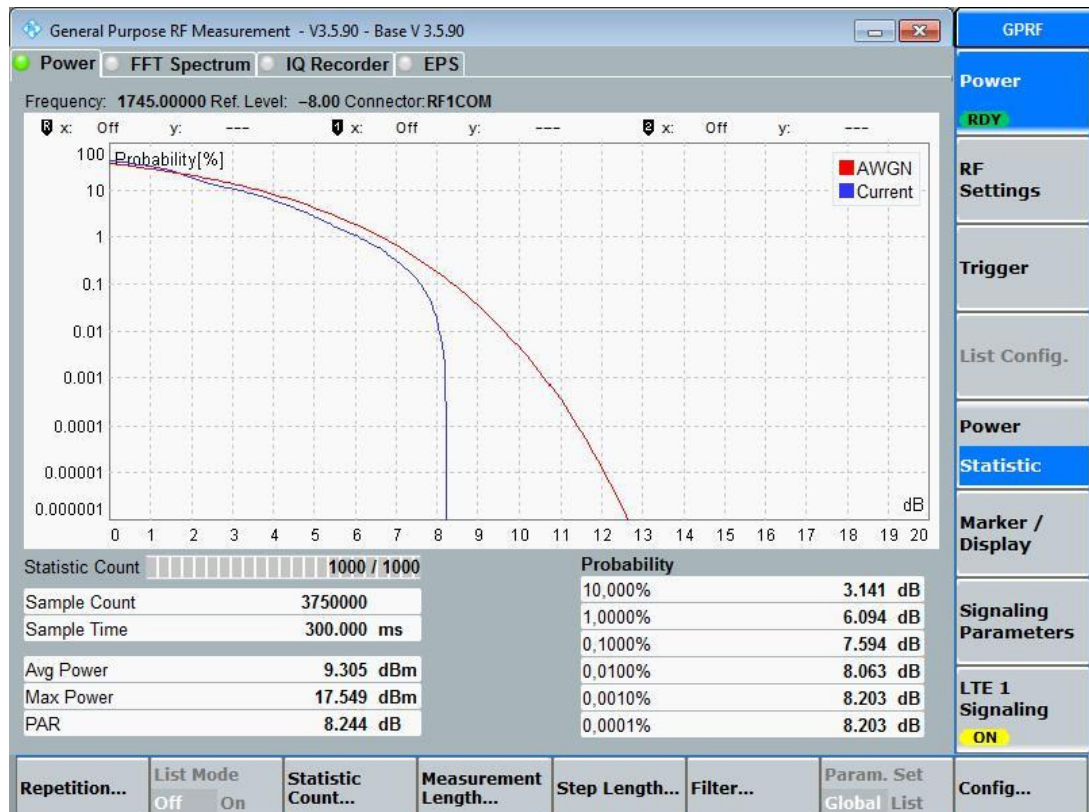


16-QAM, Ch20325, 50% RB

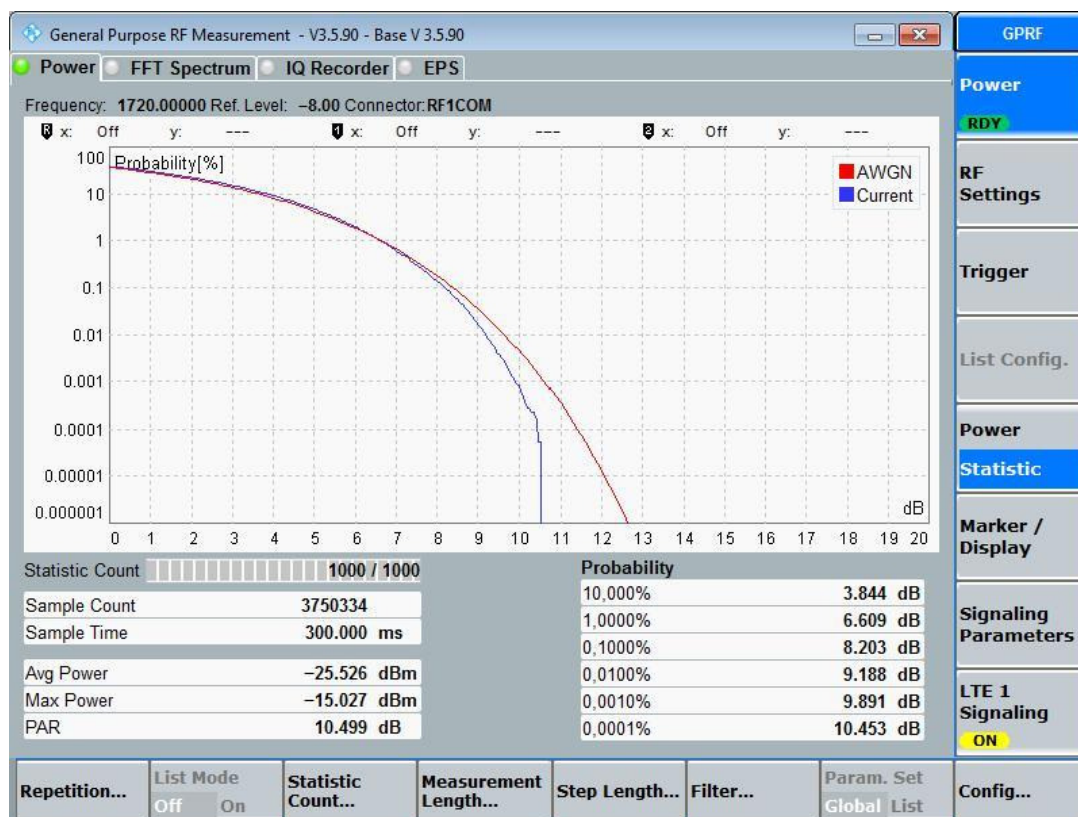
## 1.4.2.4. 20MHz signal bandwidth



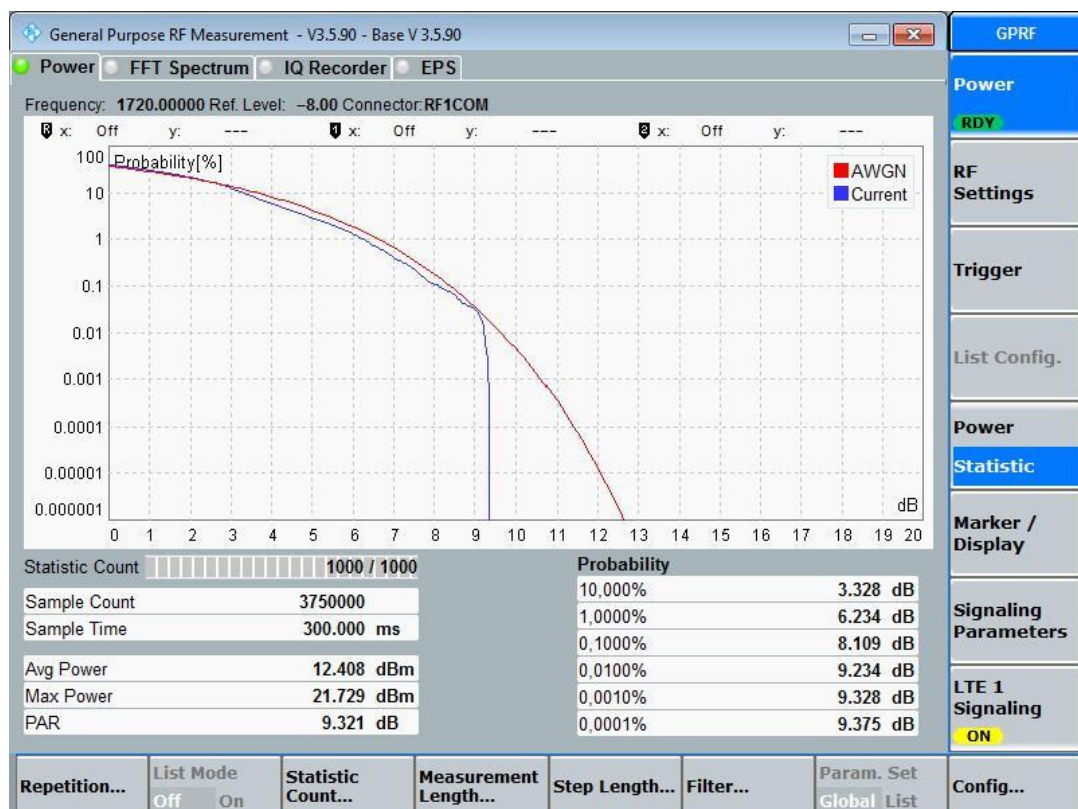
QPSK, Ch20050, 1 RB low



QPSK, Ch20300, 100% RB



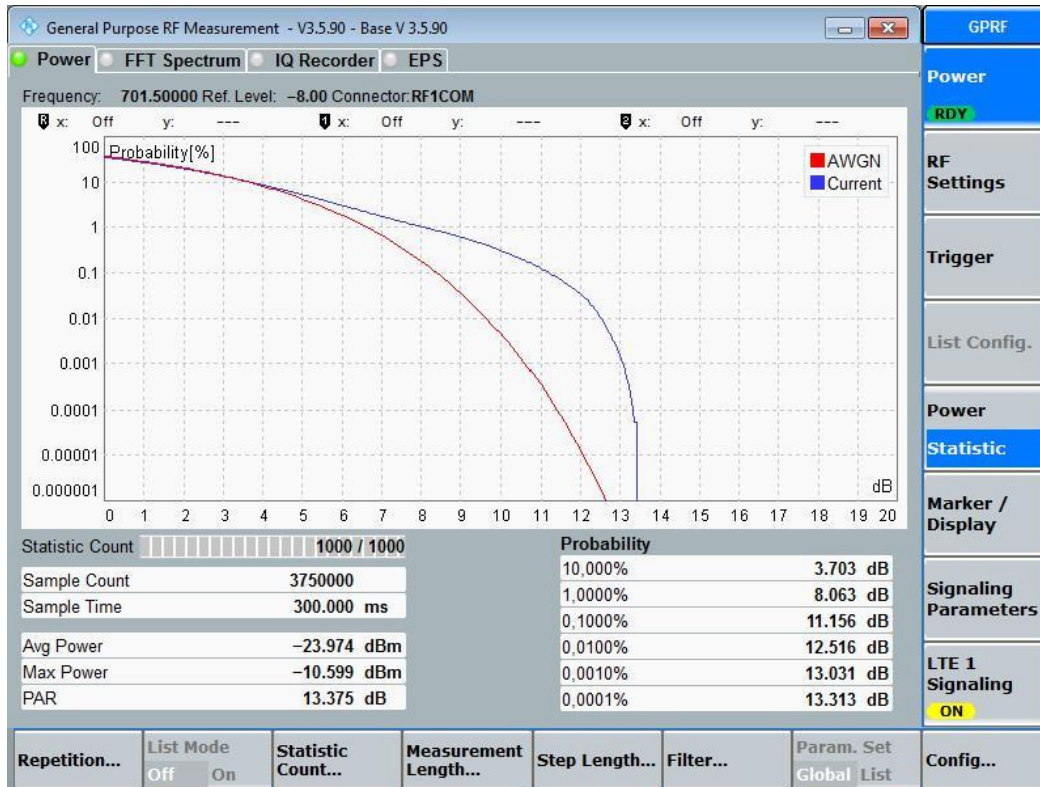
16-QAM, Ch20050, 1 RB low



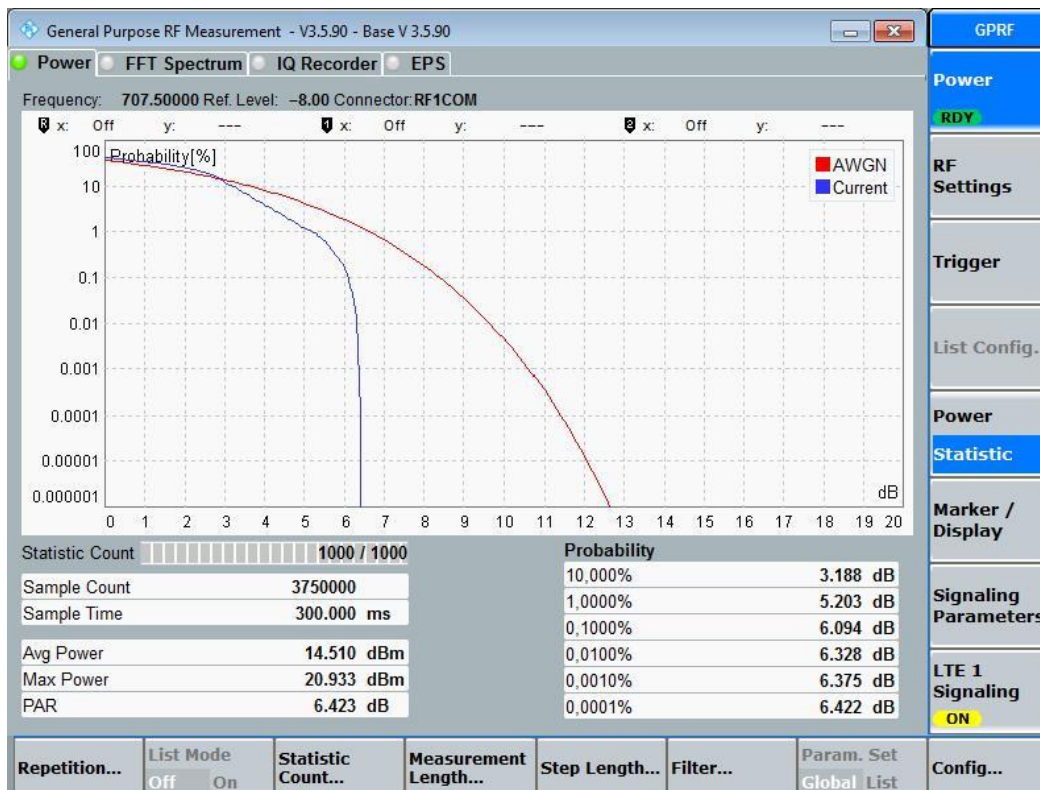
16-QAM, Ch20050, 100% RB

## 1.4.3. LTE Band 12

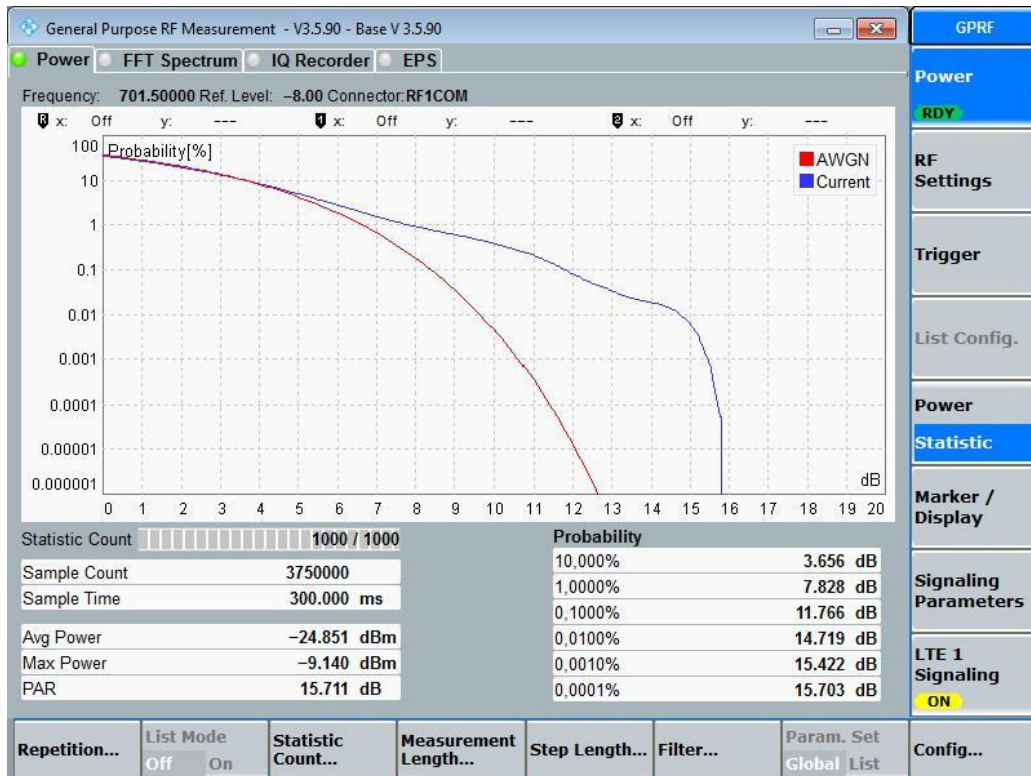
### 1.4.3.1 5MHz signal bandwidth



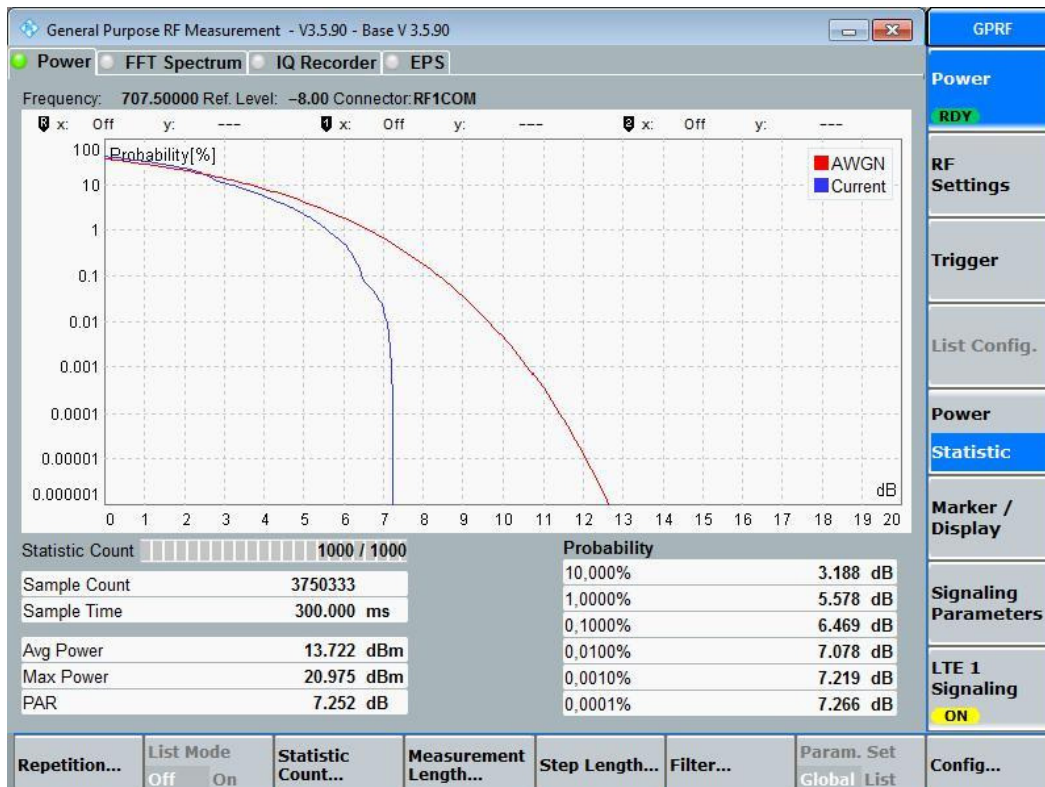
QPSK, Ch23035, 1 RB low



QPSK, Ch23095, 100% RB

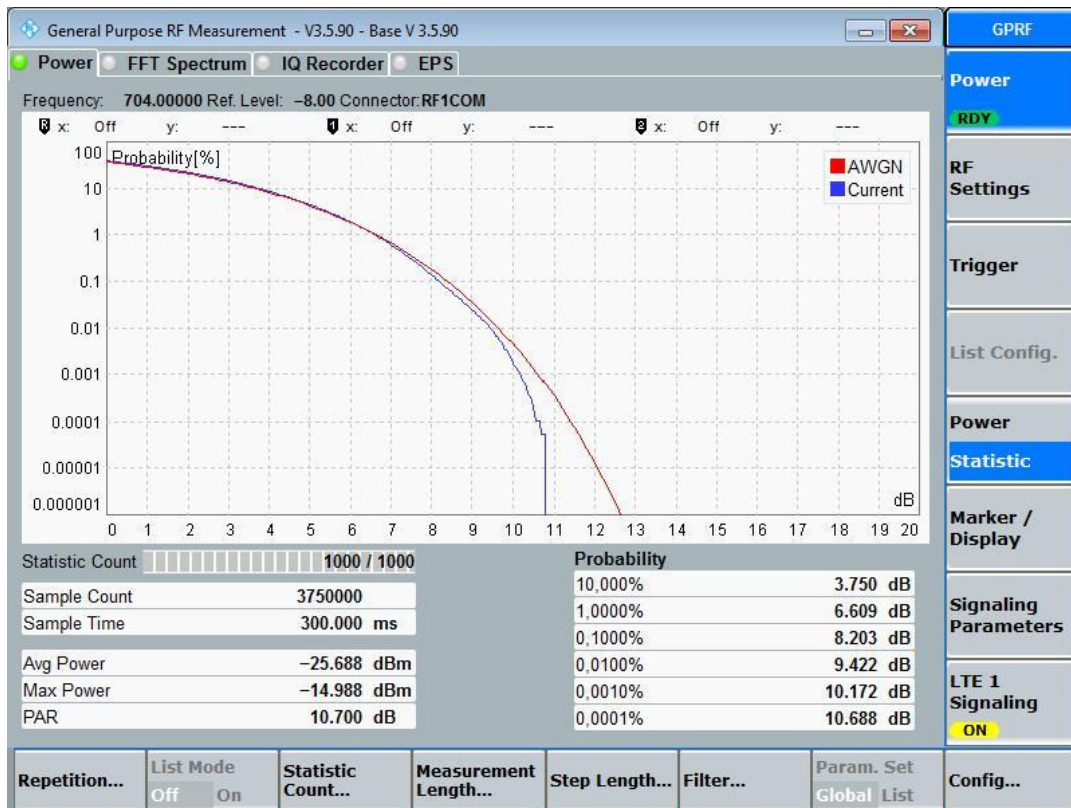


16-QAM, Ch23035, 1 RB low

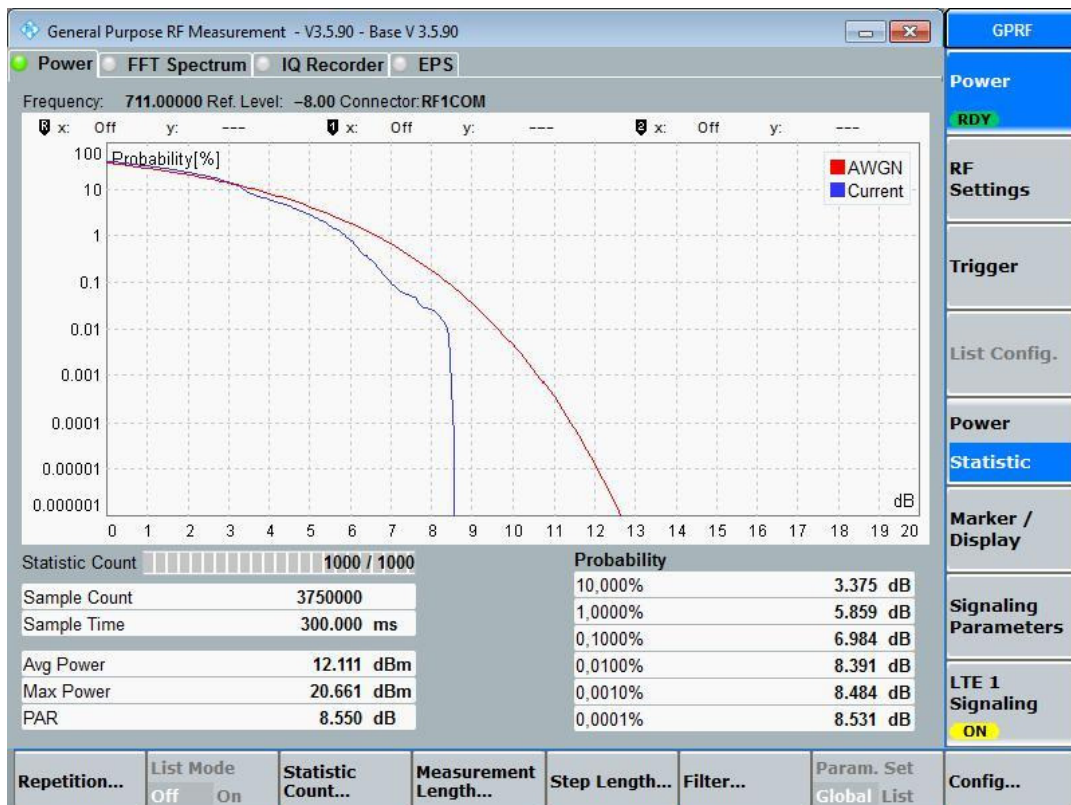


16-QAM, Ch23095, 100% RB

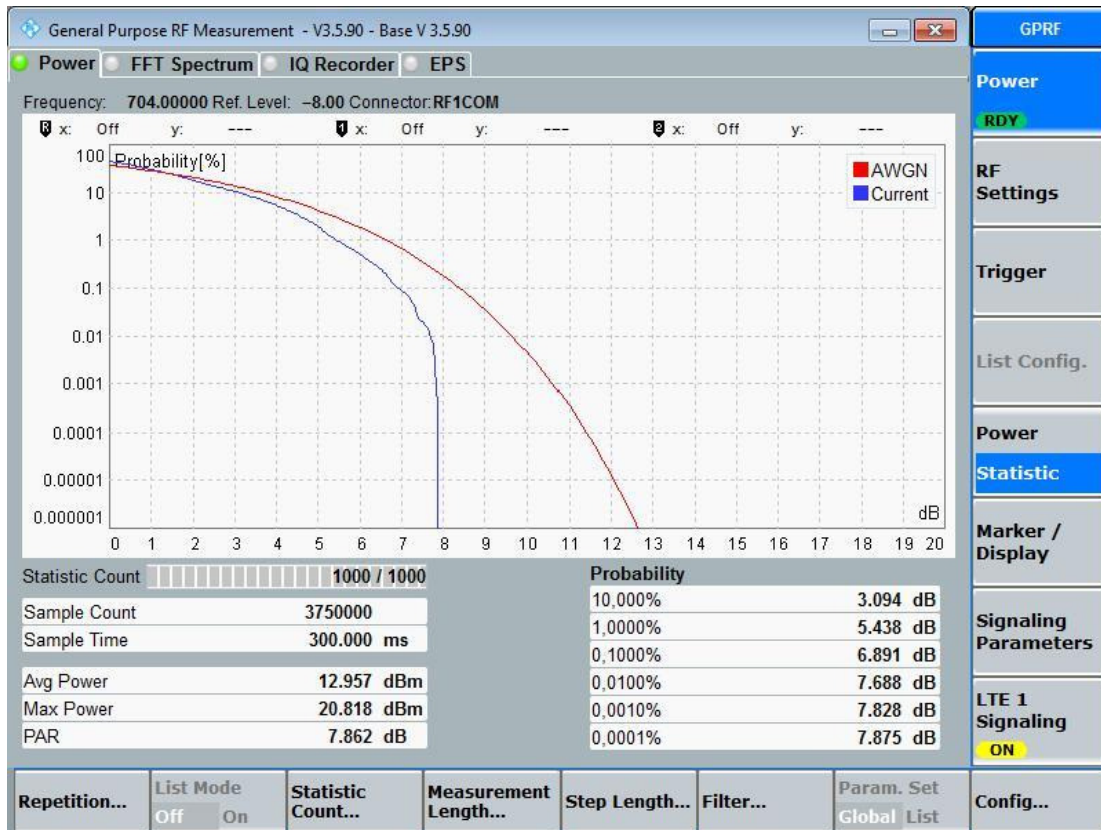
## 1.4.3.2 10MHz signal bandwidth



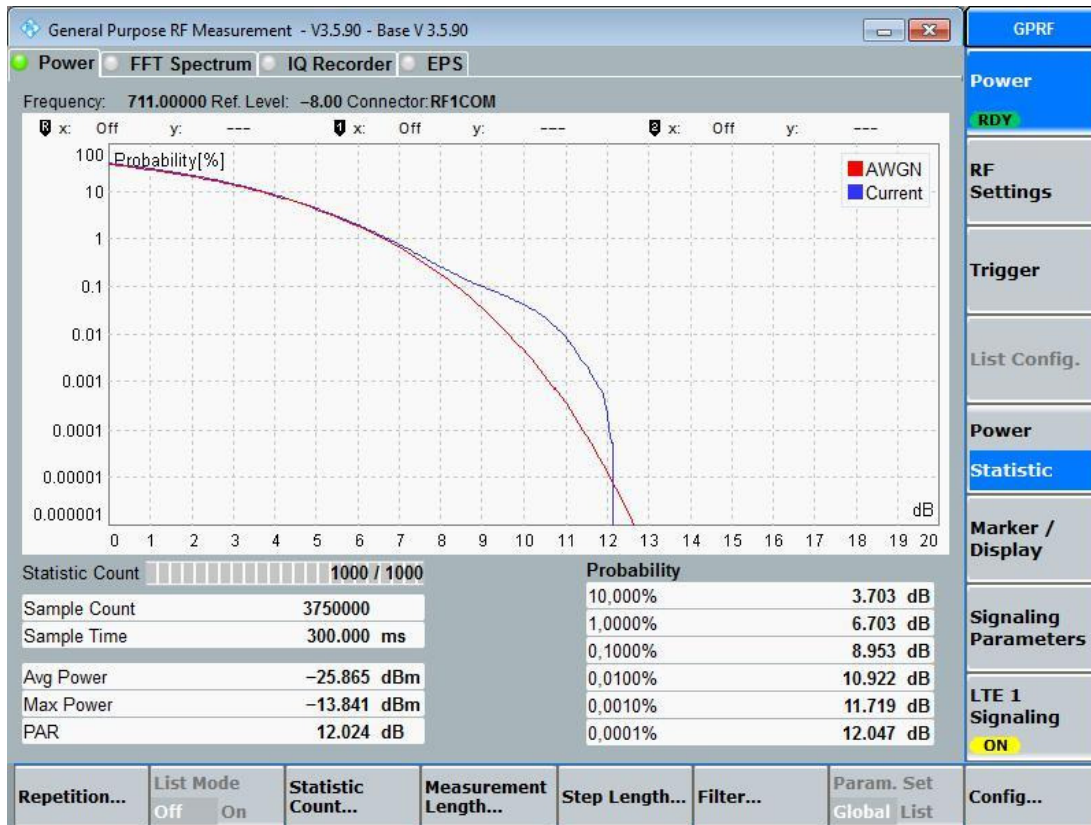
## QPSK, Ch23060, 1 RB low



QPSK, Ch23130, 100% RB



16-QAM, Ch23060, 100% RB



16-QAM, Ch23130, 1 RB low

## 1.5. Conducted Emissions on AC-mains

### Diagram 1.01

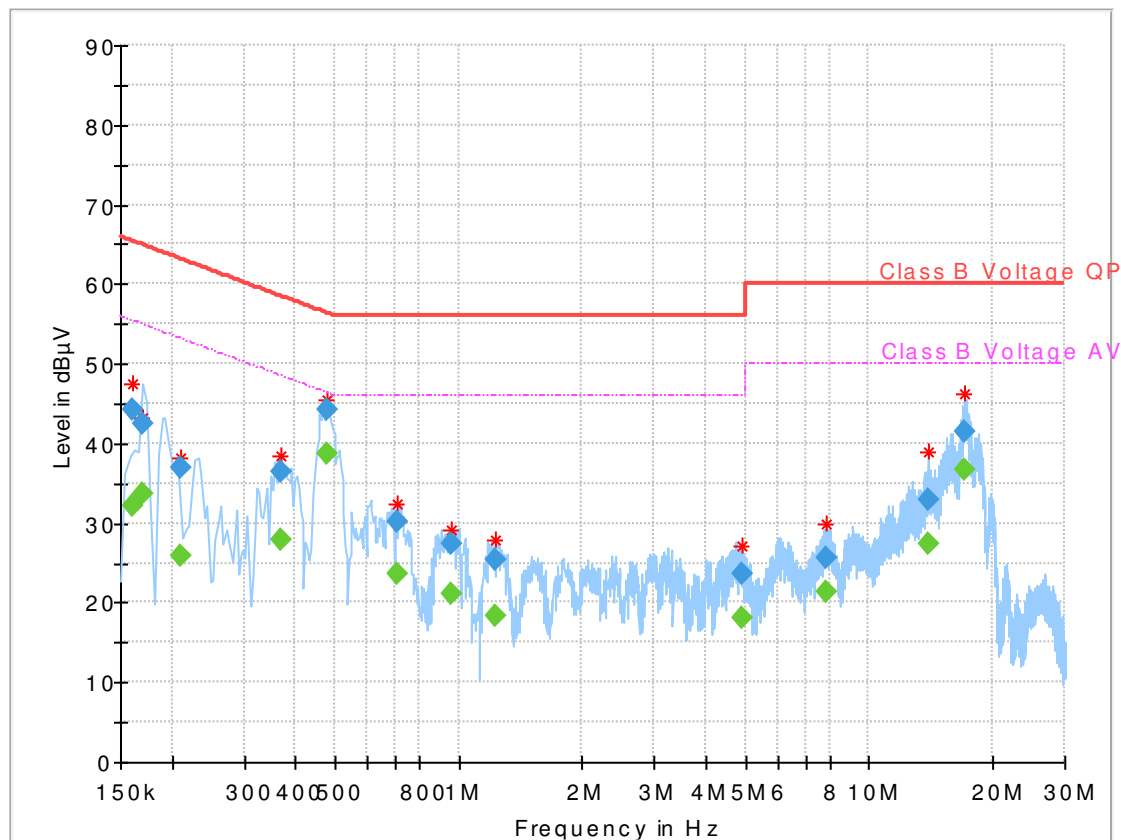
#### Common Information

|                           |                                                                  |
|---------------------------|------------------------------------------------------------------|
| Test Description:         | Conducted Voltage Measurement Class B                            |
| Test Site & Location:     | Conducted Emission, CETECOM GmbH Essen                           |
| Test Software:            | R&S EMC32 v9.15                                                  |
| Test Specification:       | FCC 15.107, FCC 15.207                                           |
| Operating Mode:           | LTE Band 4, Ch: 20175, BW: 5MHz, RB: 25                          |
| Measured on line:         | N/L1                                                             |
| Diagram details:          | Shows the peak values as a sum of measured ports in maxhold mode |
| Environmental Conditions: | Humidity: 42%rH; Temperature: 20°C                               |
| Operator:                 | HLA                                                              |
| Comments:                 |                                                                  |

#### EUT Information

|                       |                  |
|-----------------------|------------------|
| Manufacturer:         | Gemalto M2M GmbH |
| EUT:                  | WMC0300EL0 (a)   |
| HW version:           | Rev01            |
| SW version:           | 4.3.3.0b         |
| SVN:                  | -                |
| Config:               | -                |
| IMEI:                 | 35541906031722   |
| Connected Interfaces: | -                |
| Power Supply:         | 12VDC over AE1   |
| Comments:             | -                |

Full Spectrum



### Final Result

| Frequency (MHz) | QuasiPeak (dBμV) | Average (dBμV) | Limit (dBμV) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Line | PE | Correction (dB) |
|-----------------|------------------|----------------|--------------|-------------|-----------------|-----------------|------|----|-----------------|
| 0.160000        | ---              | 32.13          | 55.46        | 23.33       | 1000.0          | 9.000           | N    | GN | 0.1             |
| 0.160000        | 44.35            | ---            | 65.46        | 21.11       | 1000.0          | 9.000           | N    | GN | 0.1             |
| 0.170469        | 42.43            | ---            | 64.94        | 22.51       | 1000.0          | 9.000           | L1   | GN | 0.1             |
| 0.170469        | ---              | 33.74          | 54.94        | 21.20       | 1000.0          | 9.000           | L1   | GN | 0.1             |
| 0.209531        | 36.98            | ---            | 63.22        | 26.24       | 1000.0          | 9.000           | N    | GN | 0.1             |
| 0.209531        | ---              | 25.97          | 53.22        | 27.25       | 1000.0          | 9.000           | N    | GN | 0.1             |
| 0.367344        | 36.41            | ---            | 58.56        | 22.15       | 1000.0          | 9.000           | L1   | GN | 0.1             |
| 0.367344        | ---              | 28.02          | 48.56        | 20.54       | 1000.0          | 9.000           | L1   | GN | 0.1             |
| 0.475625        | 44.35            | ---            | 56.42        | 12.07       | 1000.0          | 9.000           | L1   | GN | 0.1             |
| 0.475625        | ---              | 38.73          | 46.42        | 7.69        | 1000.0          | 9.000           | L1   | GN | 0.1             |
| 0.706719        | ---              | 23.57          | 46.00        | 22.43       | 1000.0          | 9.000           | L1   | GN | 0.2             |
| 0.706719        | 30.12            | ---            | 56.00        | 25.88       | 1000.0          | 9.000           | L1   | GN | 0.2             |
| 0.957188        | ---              | 21.08          | 46.00        | 24.92       | 1000.0          | 9.000           | L1   | GN | 0.3             |
| 0.957188        | 27.51            | ---            | 56.00        | 28.49       | 1000.0          | 9.000           | L1   | GN | 0.3             |
| 1.223438        | ---              | 18.44          | 46.00        | 27.56       | 1000.0          | 9.000           | L1   | GN | 0.3             |
| 1.223438        | 25.47            | ---            | 56.00        | 30.53       | 1000.0          | 9.000           | L1   | GN | 0.3             |
| 4.887344        | ---              | 18.06          | 46.00        | 27.94       | 1000.0          | 9.000           | N    | GN | 0.4             |
| 4.887344        | 23.74            | ---            | 56.00        | 32.26       | 1000.0          | 9.000           | N    | GN | 0.4             |
| 7.856250        | ---              | 21.28          | 50.00        | 28.72       | 1000.0          | 9.000           | L1   | GN | 0.4             |
| 7.856250        | 25.57            | ---            | 60.00        | 34.43       | 1000.0          | 9.000           | L1   | GN | 0.4             |
| 13.937031       | ---              | 27.46          | 50.00        | 22.54       | 1000.0          | 9.000           | N    | GN | 0.6             |
| 13.937031       | 32.89            | ---            | 60.00        | 27.11       | 1000.0          | 9.000           | N    | GN | 0.6             |
| 17.153594       | ---              | 36.80          | 50.00        | 13.20       | 1000.0          | 9.000           | N    | GN | 0.7             |
| 17.153594       | 41.46            | ---            | 60.00        | 18.54       | 1000.0          | 9.000           | N    | GN | 0.7             |

## Diagram 1.02

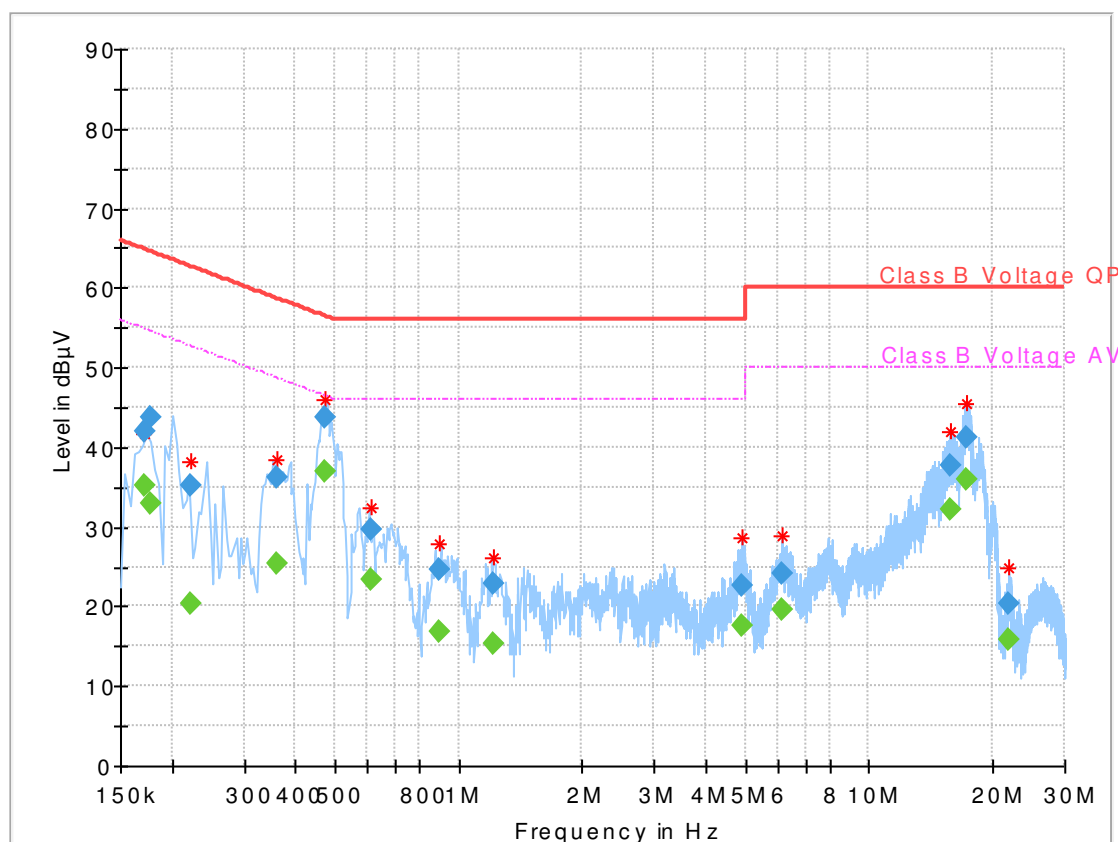
### Common Information

|                           |                                                                  |
|---------------------------|------------------------------------------------------------------|
| Test Description:         | Conducted Voltage Measurement Class B                            |
| Test Site & Location:     | Conducted Emission, CETECOM GmbH Essen                           |
| Test Software:            | R&S EMC32 v9.15                                                  |
| Test Specification:       | FCC 15.107, FCC 15.207                                           |
| Operating Mode:           | LTE Band 2, Ch: 18900, BW: 5MHz, RB: 25                          |
| Measured on line:         | N/L1                                                             |
| Diagram details:          | Shows the peak values as a sum of measured ports in maxhold mode |
| Environmental Conditions: | Humidity: 42%rH; Temperature: 20°C                               |
| Operator:                 | HLA                                                              |
| Comments:                 |                                                                  |

### EUT Information

|                       |                  |
|-----------------------|------------------|
| Manufacturer:         | Gemalto M2M GmbH |
| EUT:                  | WMC0300EL0 (a)   |
| HW version:           | Rev01            |
| SW version:           | 4.3.3.0b         |
| SVN:                  | -                |
| Config:               | -                |
| IMEI:                 | 35541906031722   |
| Connected Interfaces: | -                |
| Power Supply:         | 12VDC over AE1   |
| Comments:             | -                |

Full Spectrum



## Final Result

| Frequency (MHz) | QuasiPeak (dBμV) | Average (dBμV) | Limit (dBμV) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Line | PE | Correction (dB) |
|-----------------|------------------|----------------|--------------|-------------|-----------------|-----------------|------|----|-----------------|
| 0.170938        | ---              | 35.13          | 54.91        | 19.78       | 1000.0          | 9.000           | L1   | GN | 0.1             |
| 0.170938        | 42.00            | ---            | 64.91        | 22.91       | 1000.0          | 9.000           | L1   | GN | 0.1             |
| 0.178281        | 43.64            | ---            | 64.57        | 20.93       | 1000.0          | 9.000           | N    | GN | 0.1             |
| 0.178281        | ---              | 32.81          | 54.57        | 21.76       | 1000.0          | 9.000           | N    | GN | 0.1             |
| 0.221250        | ---              | 20.44          | 52.77        | 32.33       | 1000.0          | 9.000           | N    | GN | 0.1             |
| 0.221250        | 35.31            | ---            | 62.77        | 27.46       | 1000.0          | 9.000           | N    | GN | 0.1             |
| 0.360625        | 36.15            | ---            | 58.71        | 22.56       | 1000.0          | 9.000           | L1   | GN | 0.1             |
| 0.360625        | ---              | 25.47          | 48.71        | 23.24       | 1000.0          | 9.000           | L1   | GN | 0.1             |
| 0.470625        | 43.76            | ---            | 56.50        | 12.74       | 1000.0          | 9.000           | L1   | GN | 0.1             |
| 0.470625        | ---              | 37.03          | 46.50        | 9.47        | 1000.0          | 9.000           | L1   | GN | 0.1             |
| 0.609531        | 29.56            | ---            | 56.00        | 26.44       | 1000.0          | 9.000           | L1   | GN | 0.2             |
| 0.609531        | ---              | 23.35          | 46.00        | 22.65       | 1000.0          | 9.000           | L1   | GN | 0.2             |
| 0.900313        | ---              | 16.86          | 46.00        | 29.14       | 1000.0          | 9.000           | N    | GN | 0.2             |
| 0.900313        | 24.56            | ---            | 56.00        | 31.44       | 1000.0          | 9.000           | N    | GN | 0.2             |
| 1.218906        | ---              | 15.24          | 46.00        | 30.76       | 1000.0          | 9.000           | N    | GN | 0.3             |
| 1.218906        | 22.89            | ---            | 56.00        | 33.11       | 1000.0          | 9.000           | N    | GN | 0.3             |
| 4.893594        | ---              | 17.70          | 46.00        | 28.30       | 1000.0          | 9.000           | L1   | GN | 0.4             |
| 4.893594        | 22.59            | ---            | 56.00        | 33.41       | 1000.0          | 9.000           | L1   | GN | 0.4             |
| 6.136250        | ---              | 19.67          | 50.00        | 30.33       | 1000.0          | 9.000           | L1   | GN | 0.4             |
| 6.136250        | 24.23            | ---            | 60.00        | 35.77       | 1000.0          | 9.000           | L1   | GN | 0.4             |
| 15.715000       | ---              | 32.27          | 50.00        | 17.73       | 1000.0          | 9.000           | L1   | GN | 0.7             |
| 15.715000       | 37.67            | ---            | 60.00        | 22.33       | 1000.0          | 9.000           | L1   | GN | 0.7             |
| 17.282500       | ---              | 36.05          | 50.00        | 13.95       | 1000.0          | 9.000           | L1   | GN | 0.6             |
| 17.282500       | 41.16            | ---            | 60.00        | 18.84       | 1000.0          | 9.000           | L1   | GN | 0.6             |
| 21.780938       | ---              | 15.72          | 50.00        | 34.28       | 1000.0          | 9.000           | N    | GN | 0.7             |
| 21.780938       | 20.39            | ---            | 60.00        | 39.61       | 1000.0          | 9.000           | N    | GN | 0.7             |

## Diagram 1.03

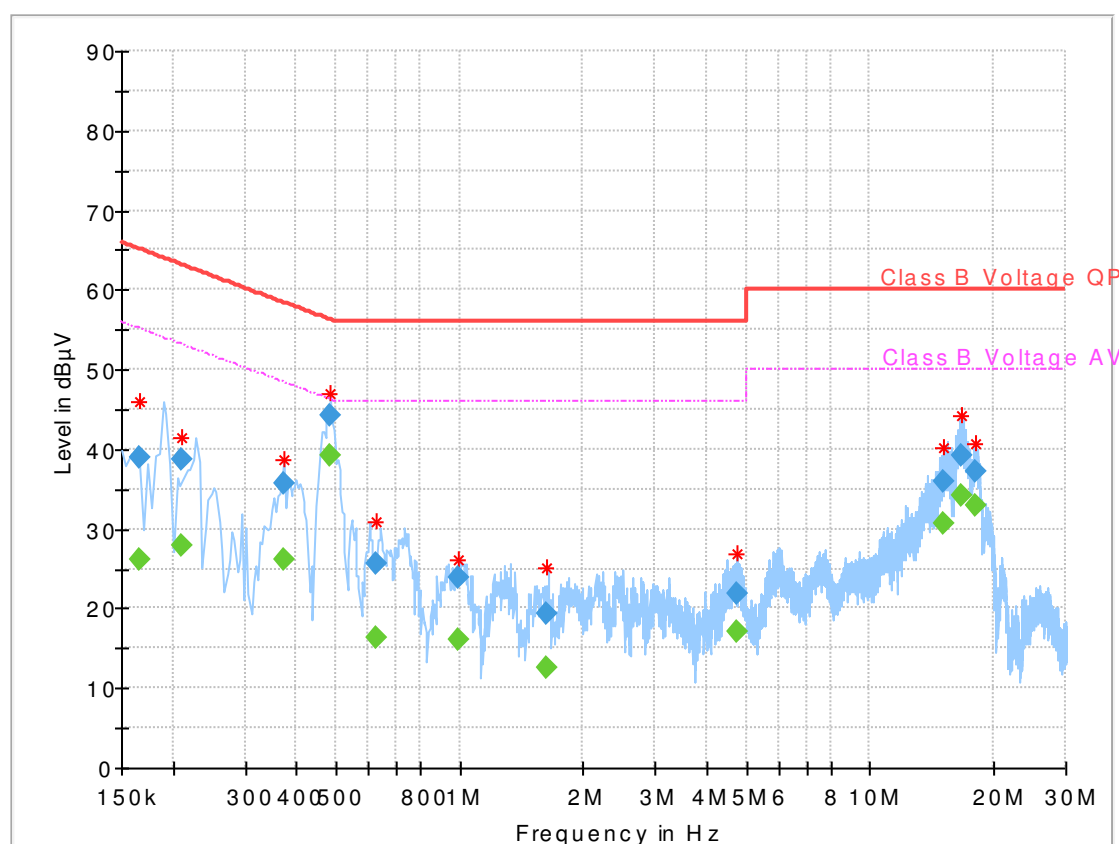
### Common Information

|                           |                                                                  |
|---------------------------|------------------------------------------------------------------|
| Test Description:         | Conducted Voltage Measurement Class B                            |
| Test Site & Location:     | Conducted Emission, CETECOM GmbH Essen                           |
| Test Software:            | R&S EMC32 v9.15                                                  |
| Test Specification:       | FCC 15.107, FCC 15.207                                           |
| Operating Mode:           | LTE Band 12, Ch: 23095, BW: 5MHz, RB: 25                         |
| Measured on line:         | N/L1                                                             |
| Diagram details:          | Shows the peak values as a sum of measured ports in maxhold mode |
| Environmental Conditions: | Humidity: 42%rH; Temperature: 20°C                               |
| Operator:                 | HLA                                                              |
| Comments:                 |                                                                  |

### EUT Information

|                       |                  |
|-----------------------|------------------|
| Manufacturer:         | Gemalto M2M GmbH |
| EUT:                  | WMC0300EL0 (a)   |
| HW version:           | Rev01            |
| SW version:           | 4.3.3.0b         |
| SVN:                  | -                |
| Config:               | -                |
| IMEI:                 | 35541906031722   |
| Connected Interfaces: | -                |
| Power Supply:         | 12VDC over AE1   |
| Comments:             | -                |

Full Spectrum



### Final Result

| Frequency (MHz) | QuasiPeak (dBμV) | Average (dBμV) | Limit (dBμV) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Line | PE | Correction (dB) |
|-----------------|------------------|----------------|--------------|-------------|-----------------|-----------------|------|----|-----------------|
| 0.166563        | ---              | 26.21          | 55.13        | 28.92       | 1000.0          | 9.000           | N    | GN | 0.1             |
| 0.166563        | 38.89            | ---            | 65.13        | 26.24       | 1000.0          | 9.000           | N    | GN | 0.1             |
| 0.210625        | 38.70            | ---            | 63.18        | 24.48       | 1000.0          | 9.000           | N    | GN | 0.1             |
| 0.210625        | ---              | 27.87          | 53.18        | 25.31       | 1000.0          | 9.000           | N    | GN | 0.1             |
| 0.375156        | ---              | 26.07          | 48.39        | 22.32       | 1000.0          | 9.000           | L1   | GN | 0.1             |
| 0.375156        | 35.62            | ---            | 58.39        | 22.77       | 1000.0          | 9.000           | L1   | GN | 0.1             |
| 0.483438        | ---              | 39.10          | 46.28        | 7.18        | 1000.0          | 9.000           | L1   | GN | 0.1             |
| 0.483438        | 44.30            | ---            | 56.28        | 11.98       | 1000.0          | 9.000           | L1   | GN | 0.1             |
| 0.625625        | ---              | 16.35          | 46.00        | 29.65       | 1000.0          | 9.000           | L1   | GN | 0.2             |
| 0.625625        | 25.53            | ---            | 56.00        | 30.47       | 1000.0          | 9.000           | L1   | GN | 0.2             |
| 0.996875        | ---              | 16.14          | 46.00        | 29.86       | 1000.0          | 9.000           | N    | GN | 0.3             |
| 0.996875        | 23.90            | ---            | 56.00        | 32.10       | 1000.0          | 9.000           | N    | GN | 0.3             |
| 1.632500        | 19.47            | ---            | 56.00        | 36.53       | 1000.0          | 9.000           | L1   | GN | 0.3             |
| 1.632500        | ---              | 12.53          | 46.00        | 33.47       | 1000.0          | 9.000           | L1   | GN | 0.3             |
| 4.737344        | 21.93            | ---            | 56.00        | 34.07       | 1000.0          | 9.000           | L1   | GN | 0.4             |
| 4.737344        | ---              | 16.99          | 46.00        | 29.01       | 1000.0          | 9.000           | L1   | GN | 0.4             |
| 15.147031       | ---              | 30.68          | 50.00        | 19.32       | 1000.0          | 9.000           | L1   | GN | 0.7             |
| 15.147031       | 35.91            | ---            | 60.00        | 24.09       | 1000.0          | 9.000           | L1   | GN | 0.7             |
| 16.788125       | 39.29            | ---            | 60.00        | 20.71       | 1000.0          | 9.000           | N    | GN | 0.7             |
| 16.788125       | ---              | 34.25          | 50.00        | 15.75       | 1000.0          | 9.000           | N    | GN | 0.7             |
| 18.074375       | 37.17            | ---            | 60.00        | 22.83       | 1000.0          | 9.000           | N    | GN | 0.6             |
| 18.074375       | ---              | 32.89          | 50.00        | 17.11       | 1000.0          | 9.000           | N    | GN | 0.6             |

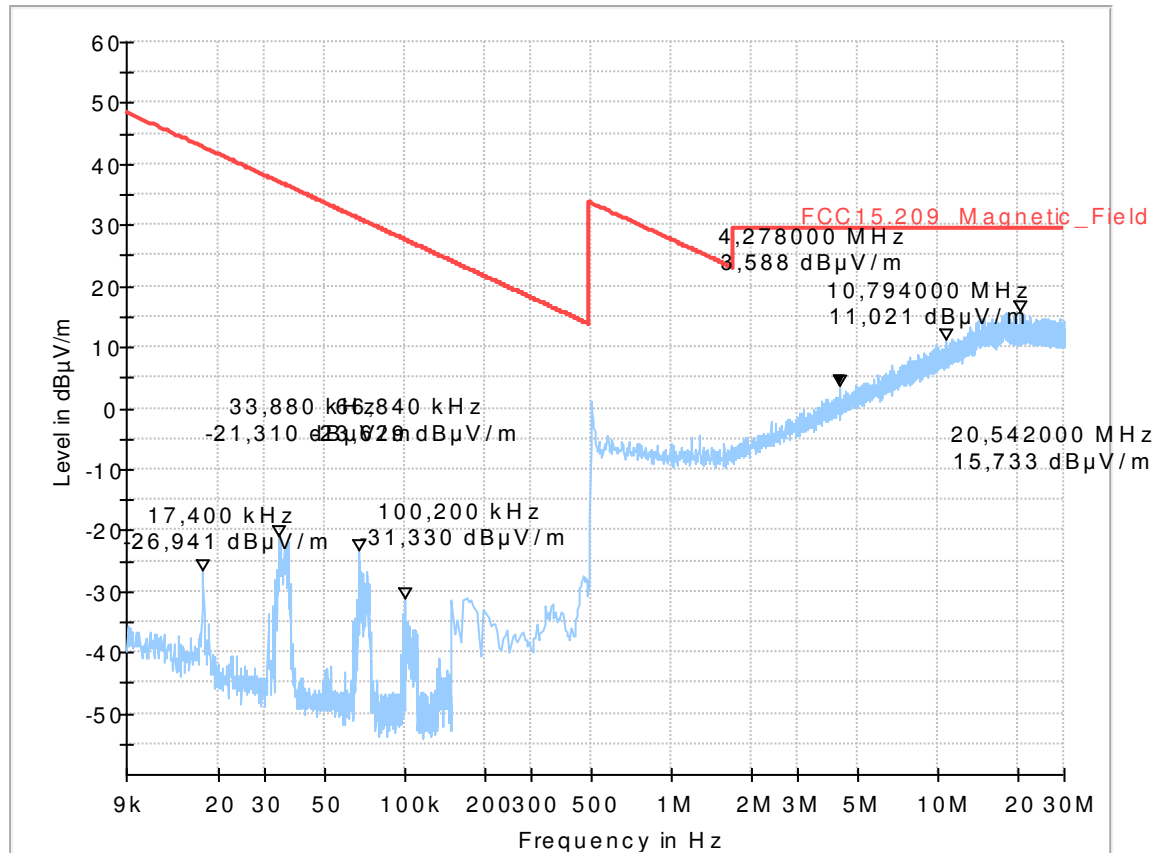
**1.6. Magnetic field emissions radiated (LTE Band 2)****Diagram No. 2.01\_R\_Ch\_19175\_BW\_5MHz**

|                           |                                                                     |             |
|---------------------------|---------------------------------------------------------------------|-------------|
| Date:                     | 08.09.2016                                                          | Page 1 of 1 |
| Test description:         | Magnetic Field Strength Measurement related to 30/300 m distance    |             |
| Test site and distance:   | Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance |             |
| Version of Testsoftware:  | EMC32 V9.25.0                                                       |             |
| Distance correction:      | used accord. table, pls. see test report                            |             |
| Technical Data:           | Please see page 2 for detailed data of measurement setup            |             |
| Rec. antenna (pre-scan):  | height 1.00 m, parallel and 90° to EUT polarisation                 |             |
| Used filter:              | bypass                                                              |             |
| Test specification:       | FCC 15.205 § 15.209; RSS-Gen: Issue 4                               |             |
|                           |                                                                     |             |
| Operator:                 | Klv                                                                 |             |
| Operating conditions:     | TX-on                                                               |             |
| Power during tests:       | 120V 60Hz                                                           |             |
| Comment 1:                | Channel: 19175                                                      |             |
| Comment 2:                | LTE Band 2 Modulation: QPSK                                         |             |
| Environmental Conditions: | Humidity: 69%rH; Temperature: 26°C                                  |             |

**EUT Information**

|                       |                  |
|-----------------------|------------------|
| Manufacturer:         | Gemalto M2M GmbH |
| -----                 |                  |
| EUT:                  | WMC0300EL0 (a)   |
| HW version:           | Rev01            |
| SW version:           | 4.3.3.0b         |
| SVN:                  | -                |
| Config:               | -                |
| IMEI:                 | 35541906031722   |
| Connected Interfaces: | -                |
| Power Supply:         | 12VDC over AE1   |
| Comments:             | -                |

### Full Spectrum



## Diagram No. 2.02\_R\_Ch\_18900\_BW\_20MHz

Test description:  
Test site and distance:  
Version of Testsoftware:  
Distance correction:  
Technical Data:  
Rec. antenna (pre-scan):  
Used filter:  
Test specification:

Date: 08.09.2016 Page 1 of 1  
Magnetic Field Strength Measurement related to 30/300 m distance  
Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance  
EMC32 V9.25.0  
used accord. table, pls. see test report  
Please see page 2 for detailed data of measurement setup  
height 1.00 m, parallel and 90° to EUT polarisation  
bypass  
FCC 15.205 § 15.209; RSS-Gen: Issue 4

Operator:  
Operating conditions:  
Power during tests:  
Comment 1:  
Comment 2:  
Environmental Conditions:

Klv  
TX-on  
120V 60Hz  
Channel: 18900  
LTE Band 2 Modulation: 16 QAM  
Humidity: 69%rH; Temperature: 26°C

### EUT Information

Manufacturer:

Gemalto M2M GmbH

EUT:

WMC0300EL0 (a)

HW version:

Rev01

SW version:

4.3.3.0b

SVN:

-

Config:

-

IMEI:

35541906031722

Connected Interfaces:

-

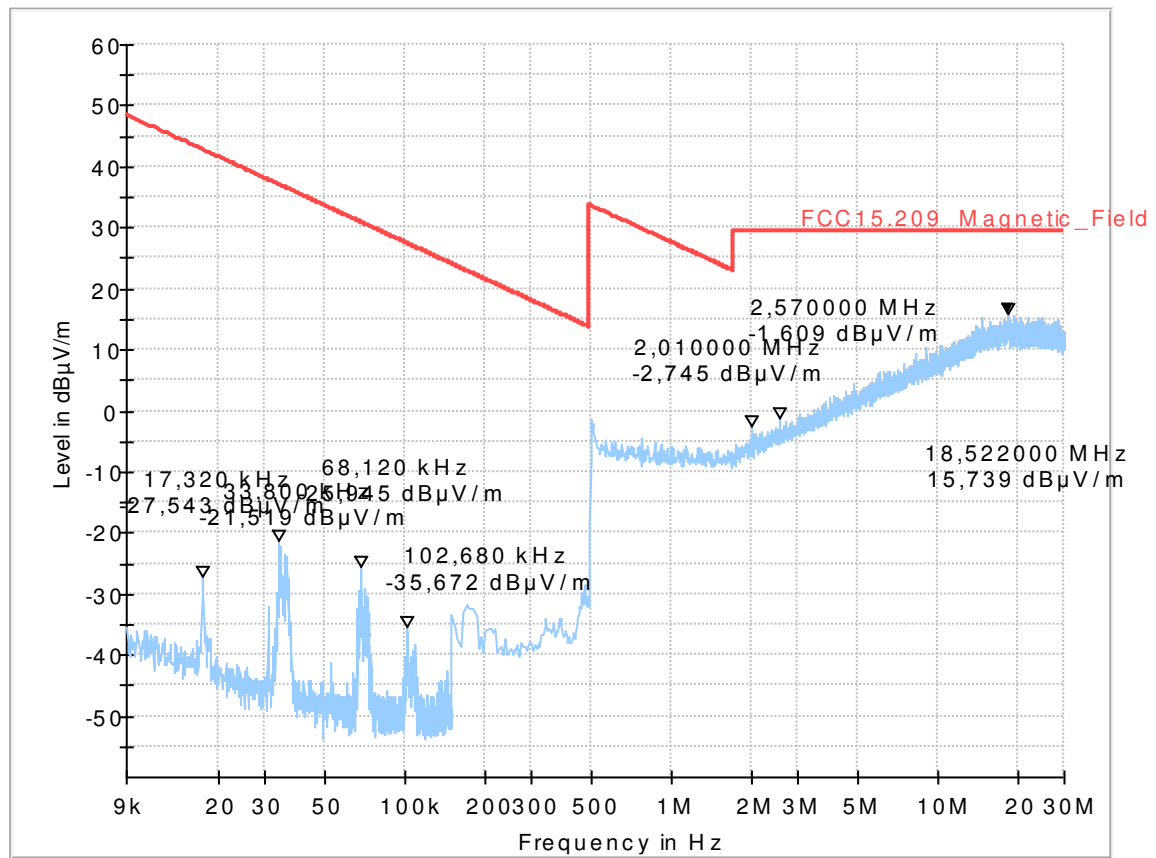
Power Supply:

12VDC over AE1

Comments:

-

Full Spectrum



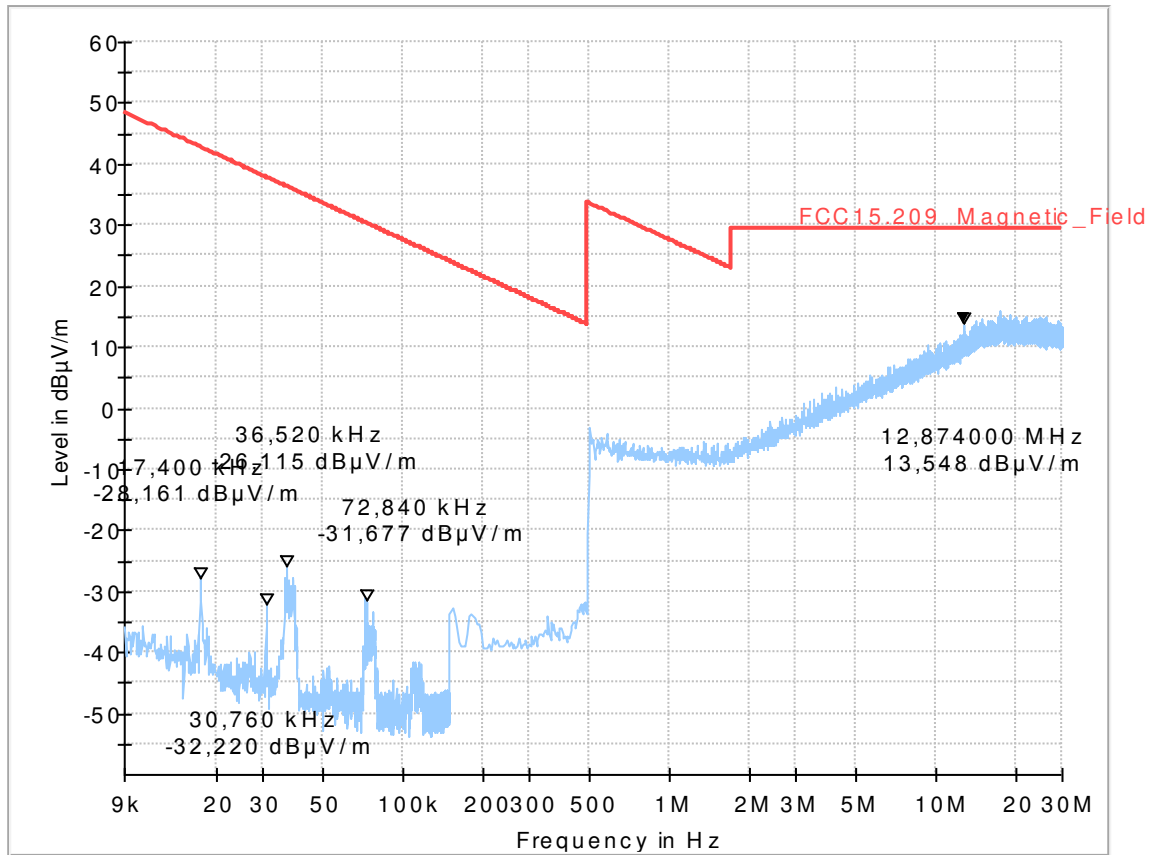
## Diagram No. 2.03\_R\_Ch\_18700\_BW\_20MHz

|                           |                                                                     |             |
|---------------------------|---------------------------------------------------------------------|-------------|
| Date:                     | 08.09.2016                                                          | Page 1 of 1 |
| Test description:         | Magnetic Field Strength Measurement related to 30/300 m distance    |             |
| Test site and distance:   | Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance |             |
| Version of Testsoftware:  | EMC32 V9.25.0                                                       |             |
| Distance correction:      | used accord. table, pls. see test report                            |             |
| Technical Data:           | Please see page 2 for detailed data of measurement setup            |             |
| Rec. antenna (pre-scan):  | height 1.00 m, parallel and 90° to EUT polarisation                 |             |
| Used filter:              | bypass                                                              |             |
| Test specification:       | FCC 15.205 § 15.209; RSS-Gen: Issue 4                               |             |
| Operator:                 | Klv                                                                 |             |
| Operating conditions:     | TX-on                                                               |             |
| Power during tests:       | 120V 60Hz                                                           |             |
| Comment 1:                | Channel: 18700                                                      |             |
| Comment 2:                | LTE Band 2 Modulation: 16 QAM                                       |             |
| Environmental Conditions: | Humidity: 69%rH; Temperature: 26°C                                  |             |

### EUT Information

|                       |                  |
|-----------------------|------------------|
| Manufacturer:         | Gemalto M2M GmbH |
| -----                 |                  |
| EUT:                  | WMC0300EL0 (a)   |
| HW version:           | Rev01            |
| SW version:           | 4.3.3.0b         |
| SVN:                  | -                |
| Config:               | -                |
| IMEI:                 | 35541906031722   |
| Connected Interfaces: | -                |
| Power Supply:         | 12VDC over AE1   |
| Comments:             | -                |

Full Spectrum



## 1.7. Spurious emissions radiated (LTE Band 2)

### 8.22\_RSE\_R\_Ch19175\_BW5

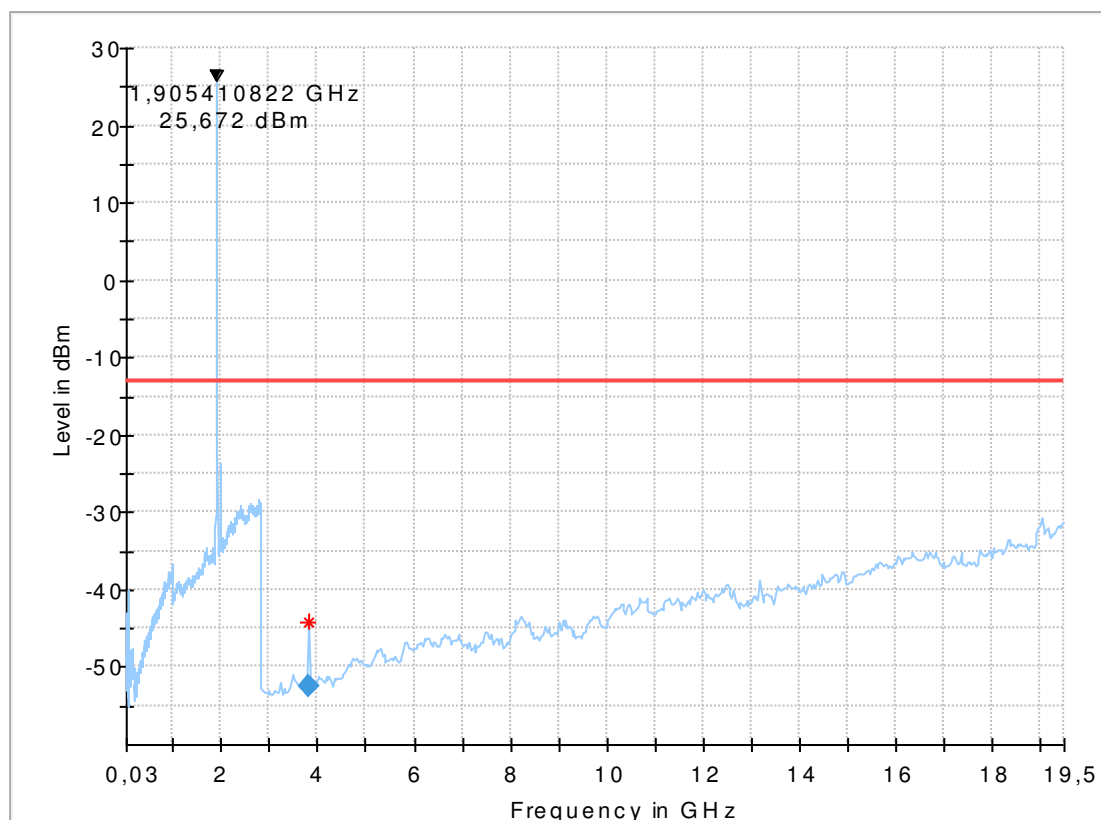
#### Common Information

|                           |                                                 |
|---------------------------|-------------------------------------------------|
| Test Description:         | Radiated field strength emission in 3m distance |
| Test Site Location:       | CETECOM GmbH Essen                              |
| Test Site:                | Fully Anechoic Room (FAR)                       |
| Test Standard:            | FCC Part 24                                     |
| Operating Mode:           | LTE Band II                                     |
| Environmental Conditions: | Humidity: 49%rH; Temperature: 26°C              |
| Operator:                 | RLs                                             |

#### EUT Information

|                       |                  |
|-----------------------|------------------|
| Manufacturer:         | Gemalto M2M GmbH |
| EUT:                  | WMC0300EL0 (a)   |
| HW version:           | Rev01            |
| SW version:           | 4.3.3.0b         |
| SVN:                  | -                |
| Config:               | -                |
| IMEI:                 | 35541906031722   |
| Connected Interfaces: | -                |
| Power Supply:         | 12VDC over AE1   |
| Comments:             | -                |

Full Spectrum



#### Final Result

| Frequency (MHz) | Limit (dBm) | Margin (dB) | Meas. Time (ms) | Pol | Azimuth (deg) | Elevation (deg) | Corr. (dB) |
|-----------------|-------------|-------------|-----------------|-----|---------------|-----------------|------------|
|-----------------|-------------|-------------|-----------------|-----|---------------|-----------------|------------|

|             |        |       |         |   |       |      |       |
|-------------|--------|-------|---------|---|-------|------|-------|
| 3803.436874 | -13.00 | 39.50 | 10000.0 | H | 280.0 | 90.0 | -95.2 |
|-------------|--------|-------|---------|---|-------|------|-------|

## 8.23\_RSE\_R\_Ch18700\_BW20

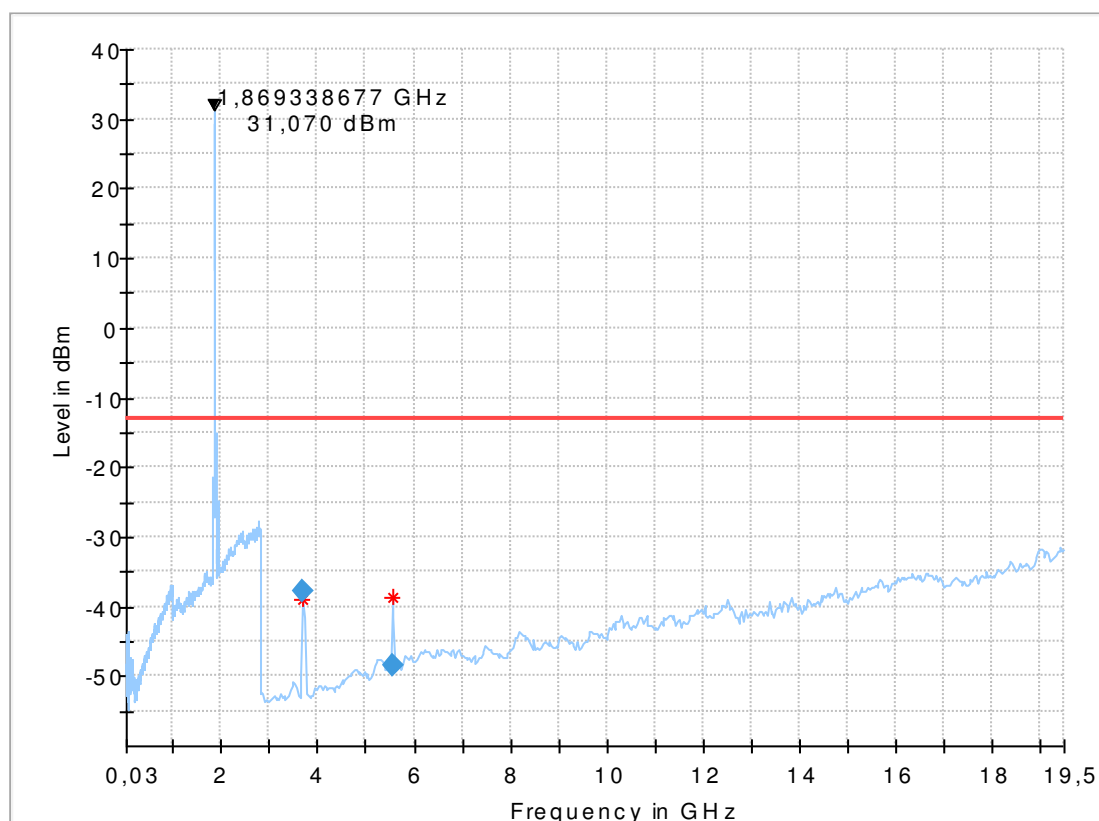
### Common Information

|                           |                                                 |
|---------------------------|-------------------------------------------------|
| Test Description:         | Radiated field strength emission in 3m distance |
| Test Site Location:       | CETECOM GmbH Essen                              |
| Test Site:                | Fully Anechoic Room (FAR)                       |
| Test Standard:            | FCC Part 24                                     |
| Operating Mode:           | LTE Band II                                     |
| Environmental Conditions: | Humidity: 49%rH; Temperature: 26°C              |
| Operator:                 | RLs                                             |

### EUT Information

|                       |                  |
|-----------------------|------------------|
| Manufacturer:         | Gemalto M2M GmbH |
| EUT:                  | WMC0300EL0 (a)   |
| HW version:           | Rev01            |
| SW version:           | 4.3.3.0b         |
| SVN:                  | -                |
| Config:               | -                |
| IMEI:                 | 35541906031722   |
| Connected Interfaces: | -                |
| Power Supply:         | 12VDC over AE1   |
| Comments:             | -                |

### Full Spectrum



### Final\_Result

| Frequency (MHz) | Limit (dBm) | Margin (dB) | Meas. Time (ms) | Pol | Azimuth (deg) | Elevation (deg) | Corr. (dB) |
|-----------------|-------------|-------------|-----------------|-----|---------------|-----------------|------------|
| 3704.002005     | -13.00      | 24.69       | 10000.0         | H   | 305.0         | 90.0            | -94.9      |
| 5543.613226     | -13.00      | 35.39       | 10000.0         | H   | 37.0          | 90.0            | -89.9      |

## 8.24\_RSE\_R\_Ch18900\_BW20

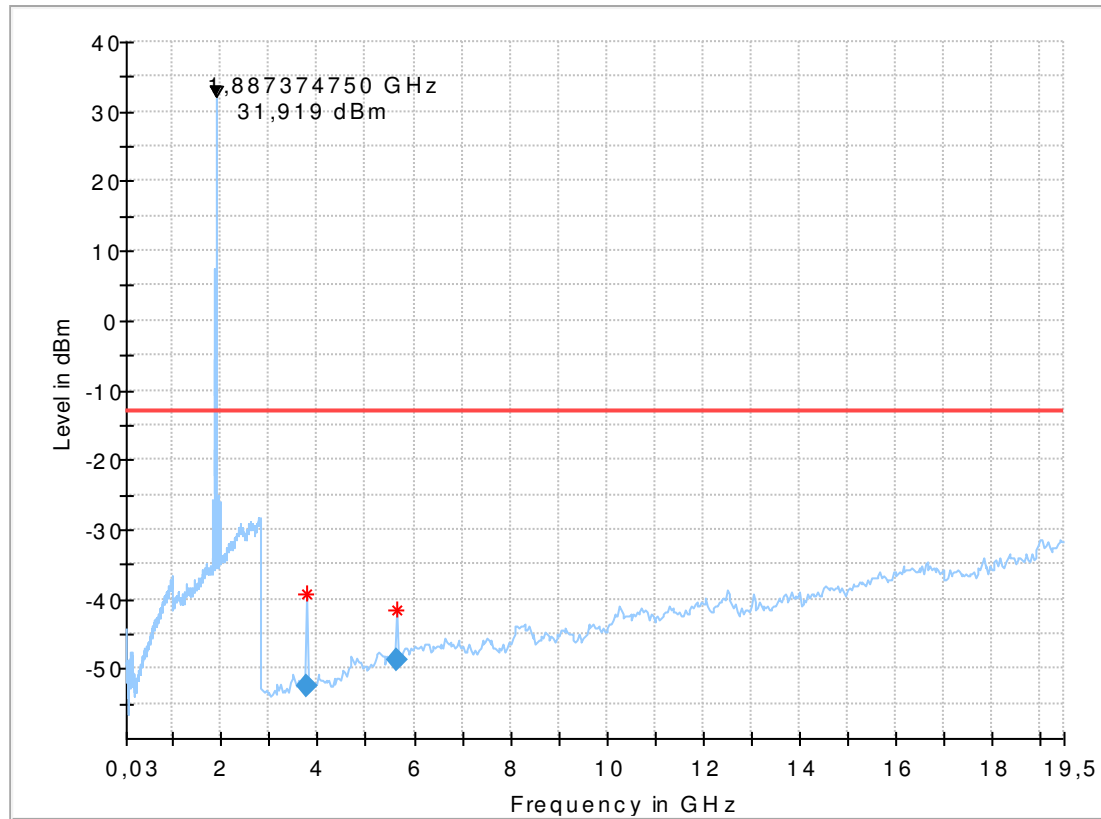
### Common Information

|                           |                                                 |
|---------------------------|-------------------------------------------------|
| Test Description:         | Radiated field strength emission in 3m distance |
| Test Site Location:       | CETECOM GmbH Essen                              |
| Test Site:                | Fully Anechoic Room (FAR)                       |
| Test Standard:            | FCC Part 24                                     |
| Operating Mode:           | LTE Band II                                     |
| Environmental Conditions: | Humidity: 49%rH; Temperature: 26°C              |
| Operator:                 | RI                                              |

### EUT Information

|                       |                  |
|-----------------------|------------------|
| Manufacturer:         | Gemalto M2M GmbH |
| EUT:                  | WMC0300EL0 (a)   |
| HW version:           | Rev01            |
| SW version:           | 4.3.3.0b         |
| SVN:                  | -                |
| Config:               | -                |
| IMEI:                 | 35541906031722   |
| Connected Interfaces: | -                |
| Power Supply:         | 12VDC over AE1   |
| Comments:             | -                |

## Full Spectrum



## Final Result

| Frequency (MHz) | Limit (dBm) | Margin (dB) | Meas. Time (ms) | Pol | Azimuth (deg) | Elevation (deg) | Corr. (dB) |
|-----------------|-------------|-------------|-----------------|-----|---------------|-----------------|------------|
| 3771.004008     | -13.00      | 39.51       | 10000.0         | H   | 261.0         | 90.0            | -95.1      |
| 5644.270541     | -13.00      | 35.65       | 10000.0         | H   | 297.0         | 90.0            | -89.7      |

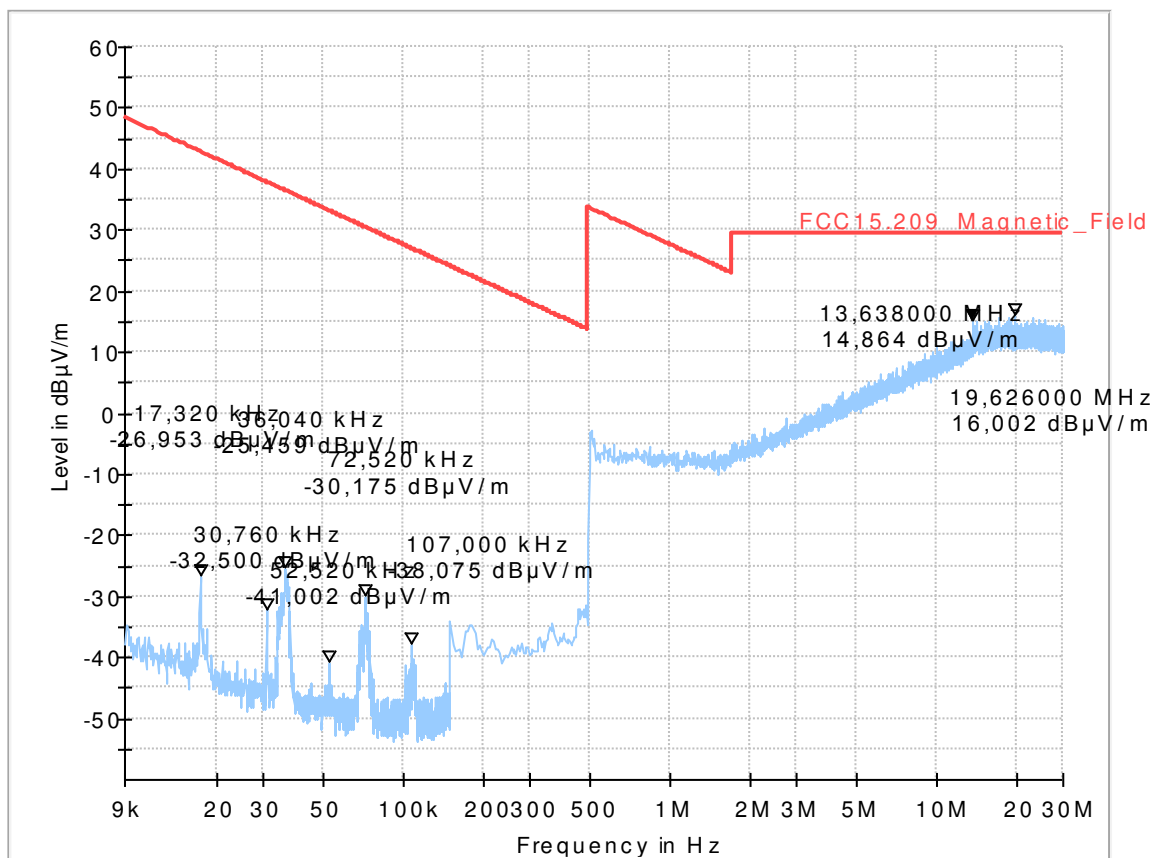
**1.8. Magnetic field emissions radiated (LTE Band 4)****Diagram No. 2.05\_R\_Ch\_20300\_BW\_20MHz**

|                           |                                                                     |             |
|---------------------------|---------------------------------------------------------------------|-------------|
| Date:                     | 08.09.2016                                                          | Page 1 of 1 |
| Test description:         | Magnetic Field Strength Measurement related to 30/300 m distance    |             |
| Test site and distance:   | Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance |             |
| Version of Testsoftware:  | EMC32 V9.25.0                                                       |             |
| Distance correction:      | used accord. table, pls. see test report                            |             |
| Technical Data:           | Please see page 2 for detailed data of measurement setup            |             |
| Rec. antenna (pre-scan):  | height 1.00 m, parallel and 90° to EUT polarisation                 |             |
| Used filter:              | bypass                                                              |             |
| Test specification:       | FCC 15.205 § 15.209; RSS-Gen: Issue 4                               |             |
| Operator:                 | Klv                                                                 |             |
| Operating conditions:     | TX-on                                                               |             |
| Power during tests:       | 120V 60Hz                                                           |             |
| Comment 1:                | Channel: 20300 (High channel)                                       |             |
| Comment 2:                | LTE Band 4 Modulation: QPSK                                         |             |
| Environmental Conditions: | Humidity: 63%rH; Temperature: 20°C                                  |             |

**EUT Information**

|                       |                  |
|-----------------------|------------------|
| Manufacturer:         | Gemalto M2M GmbH |
| -----                 |                  |
| EUT:                  | WMC0300EL0 (a)   |
| HW version:           | Rev01            |
| SW version:           | 4.3.3.0b         |
| SVN:                  | -                |
| Config:               | -                |
| IMEI:                 | 35541906031722   |
| Connected Interfaces: | -                |
| Power Supply:         | 12VDC over AE1   |
| Comments:             | -                |

Full Spectrum



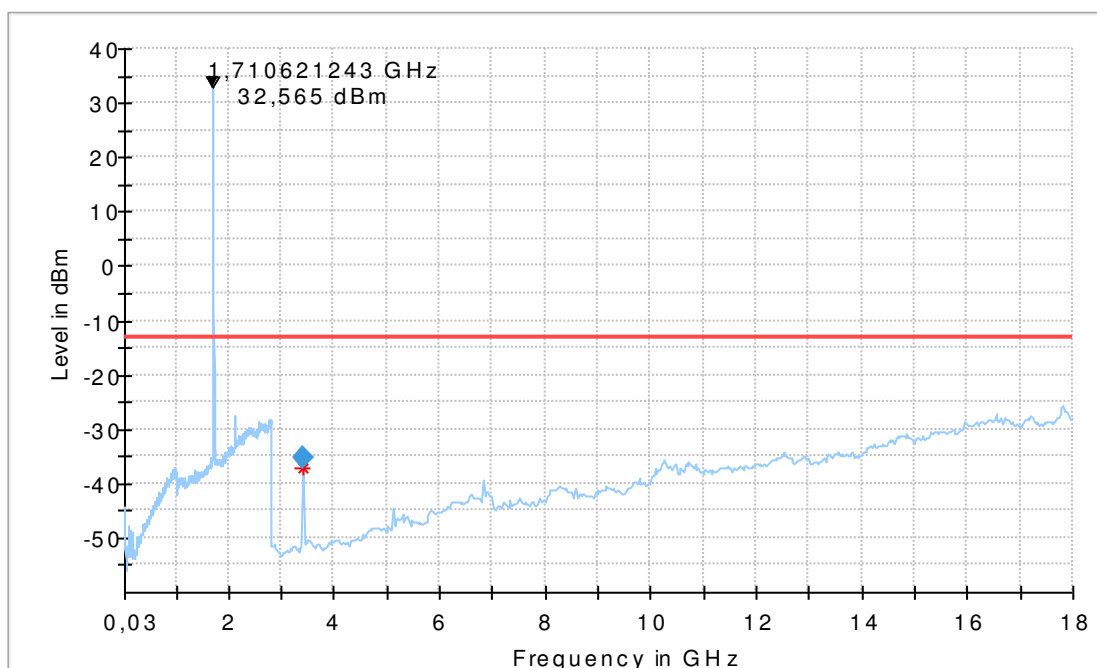
## 1.9. Spurious emissions radiated (LTE Band 4)

### 8.40\_RSE\_R\_Ch19975\_1RB\_BW\_5\_QPSK

#### Common Information

|                           |                                        |
|---------------------------|----------------------------------------|
| Test Description:         | Radiated Spurious Emissions LTE Band 4 |
| Test Site Location:       | CETECOM GmbH Essen                     |
| Test Site:                | Fully Anechoic Room (FAR)              |
| Test Standard:            | FCC Part 27.53 / RSS-139               |
| Comm. Link:               | LTE Band 4                             |
| Operating Mode:           | MS allocated channel 19975             |
| Environmental Conditions: | Humidity: 44%rH; Temperature: 28°C     |
| Operator:                 | RLs                                    |

Full Spectrum



#### Final Result

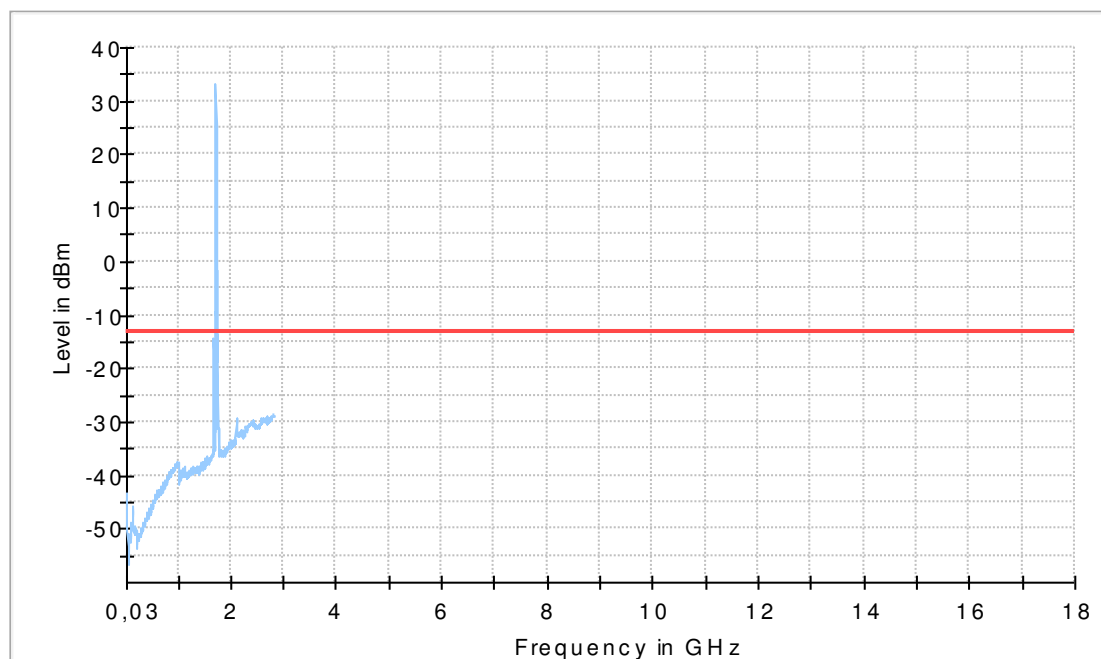
| Frequency (MHz) | Limit (dBm) | Margin (dB) | Meas. Time (ms) | Height (cm) | Pol | Azimuth (deg) | Elevation (deg) | Corr. (dB) | Comment               |
|-----------------|-------------|-------------|-----------------|-------------|-----|---------------|-----------------|------------|-----------------------|
| 3420.731463     | -13.00      | 22.23       | 10000.0         | 155.0       | H   | 31.0          | 90.0            | -95.0      | 18:49:05 - 15.09.2016 |

## 8.42a\_RSE\_R-Ch20300\_BW20\_30-2800MHz

### Common Information

|                           |                                                        |
|---------------------------|--------------------------------------------------------|
| Test Description:         | Band-Edge low - Radiated Spurious Emissions LTE Band 7 |
| Test Site Location:       | CETECOM GmbH Essen                                     |
| Test Site:                | Fully Anechoic Room (FAR)                              |
| Test Standard:            | FCC Part 27.53(l)(4) Mobile stations limits            |
| Operating Mode:           | UE allocated channel                                   |
| Environmental Conditions: | Humidity: 53%rH; Temperature: 22°C                     |
| Test SW Version:          | EMC32 V9.26.0                                          |
| Operator:                 | Klv                                                    |
| Remarks:                  | EUT - laying/standing position                         |

Full Spectrum



## 8.42b\_RSE\_R-Ch20300\_BW20\_2.8-18GHz

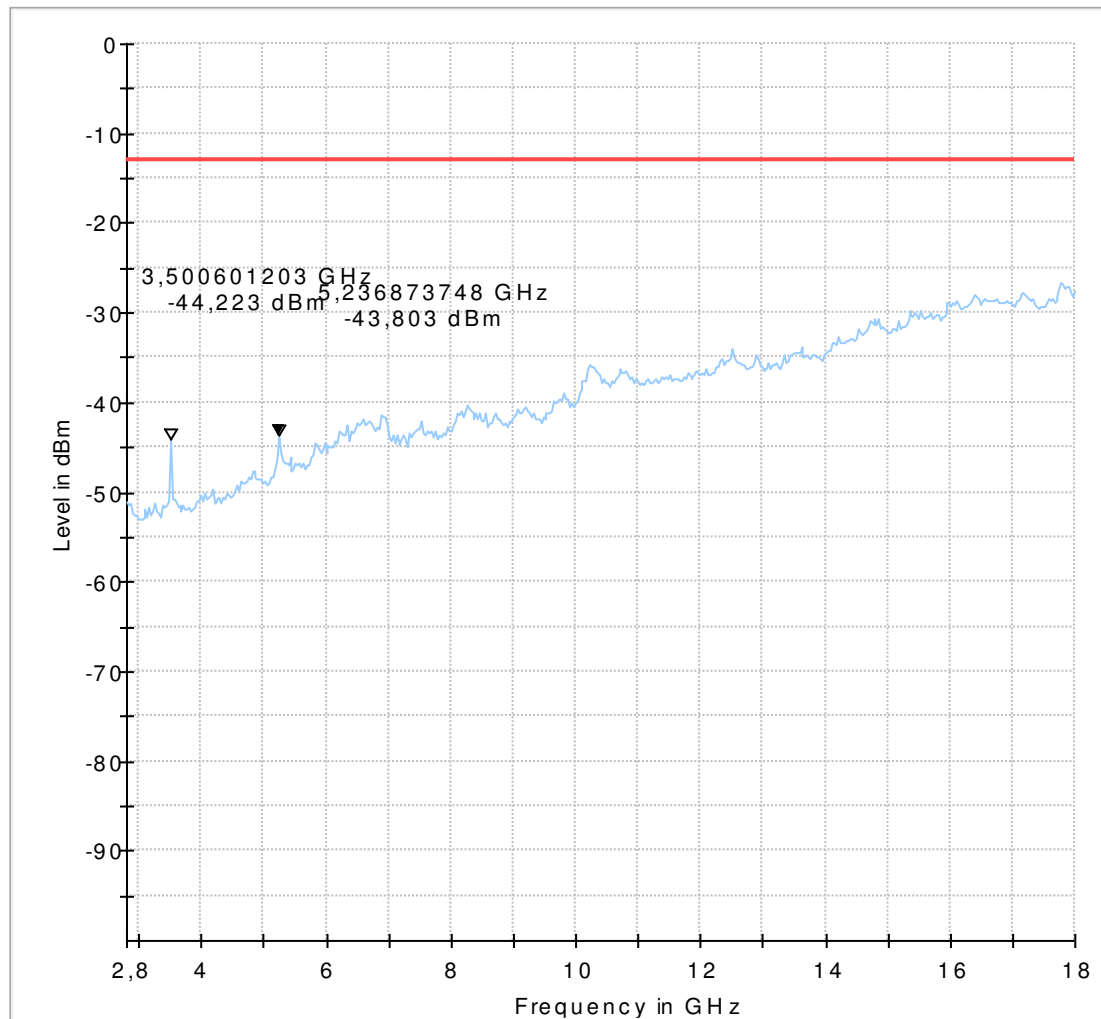
### Common Information

|                           |                                        |
|---------------------------|----------------------------------------|
| Test Description:         | Radiated Spurious Emissions LTE Band 4 |
| Test Site Location:       | CETECOM GmbH Essen                     |
| Test Site:                | Fully Anechoic Room (FAR)              |
| Test Standard:            | FCC Part 27.53 / RSS-139               |
| Comm. Link:               | LTE Band 4                             |
| Operating Mode:           | MS allocated channel                   |
| Exclusionband:            | 1710 to 1755 MHz                       |
| Environmental Conditions: | Humidity: 47%rH; Temperature: 26°C     |
| Operator:                 | Klv                                    |

### EUT Information

|                       |                  |
|-----------------------|------------------|
| Manufacturer:         | Gemalto M2M GmbH |
| EUT:                  | WMC0532PL3 (b)   |
| HW version:           | Rev6.6           |
| SW version:           | Revision 03.011  |
| SVN:                  | -                |
| Config:               | C01              |
| IMEI:                 | 355419060317164  |
| Connected Interfaces: | -                |
| Power Supply:         | 12VDC            |
| Comments:             | -                |

## Full Spectrum

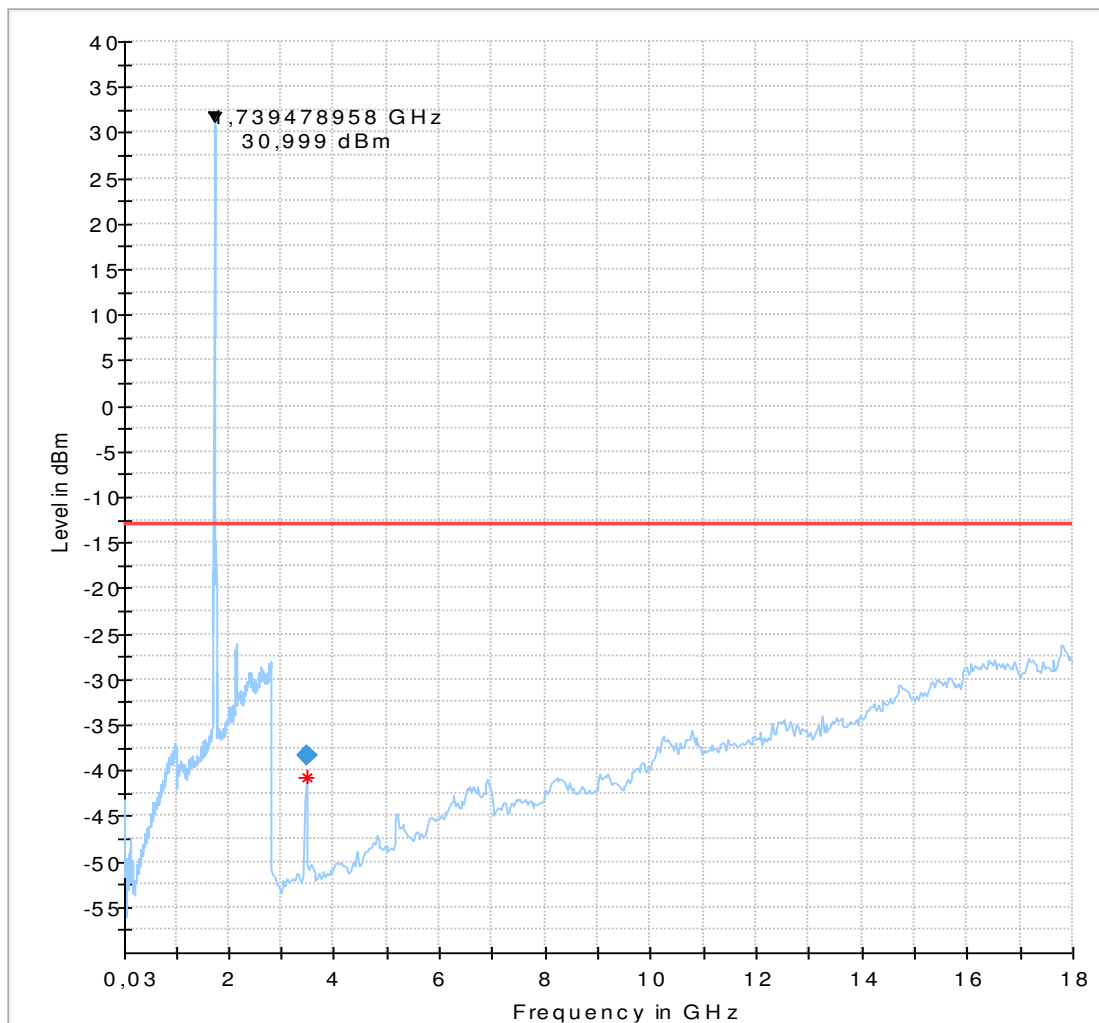


## 8.44\_RSE\_R\_Ch20175\_BW20

### EUT Information

|                       |                  |
|-----------------------|------------------|
| Manufacturer:         | Gemalto M2M GmbH |
| EUT:                  | WMC0532PL3 (b)   |
| HW version:           | Rev6.6           |
| SW version:           | Revision 03.011  |
| SVN:                  | -                |
| Config:               | C01              |
| Serial number:        | 355419060317164  |
| Connected Interfaces: | -                |
| Power Supply:         | 12VDC            |
| Comments:             | -                |

### Full Spectrum



### Final Result

| Frequency (MHz) | MaxPeak (dBm) | Limit (dBm) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Elevation (deg) | Corr. (dB) |
|-----------------|---------------|-------------|-------------|-----------------|-----------------|-------------|-----|---------------|-----------------|------------|
| 3481.352706     | -38.35        | -13.00      | 25.35       | 10000.0         | 1000.000        | 155.0       | H   | 234.0         | 90.0            | -93.8      |

(continuation of the "Final\_Result" table from column 17 ...)

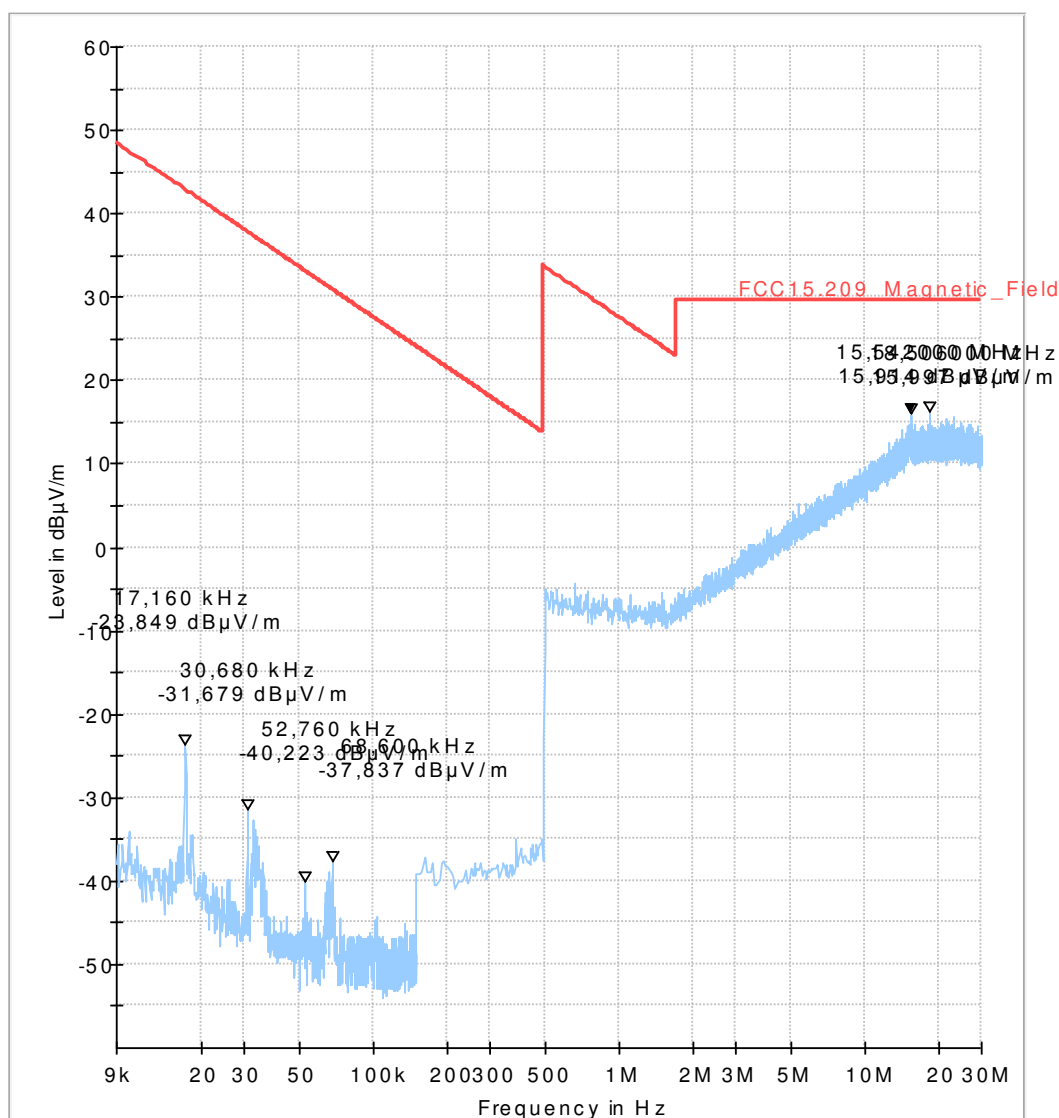
| Frequency (MHz) | Comment               |
|-----------------|-----------------------|
| 3481.352706     | 21:42:06 - 06.09.2016 |

## 1.10. Magnetic field emissions radiated (LTE Band 12)

### Diagram No. 2.08\_R\_Ch\_23035\_BW\_5MHz

|                          |                                                                     |
|--------------------------|---------------------------------------------------------------------|
| Test description:        | Date: 16.09.2016 Page 1 of 1                                        |
| Test site and distance:  | Magnetic Field Strength Measurement related to 30/300 m distance    |
| Version of Testsoftware: | Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance |
| Distance correction:     | EMC32 V9.25.0                                                       |
| Technical Data:          | used accord. table, pls. see test report                            |
| Rec. antenna (pre-scan): | Please see page 2 for detailed data of measurement setup            |
| Used filter:             | height 1.00 m, parallel and 90° to EUT polarisation                 |
| Test specification:      | bypass                                                              |
|                          | FCC 15.205 § 15.209; RSS-Gen: Issue 4                               |
| Operator:                | Klv                                                                 |
| Operating conditions:    | TX-on                                                               |
| Power during tests:      | 12V DC, 110V/60Hz                                                   |
| Comment 1:               | Channel: 23035                                                      |
| Comment 2:               | LTE Band 12 Modulation: QPSK                                        |

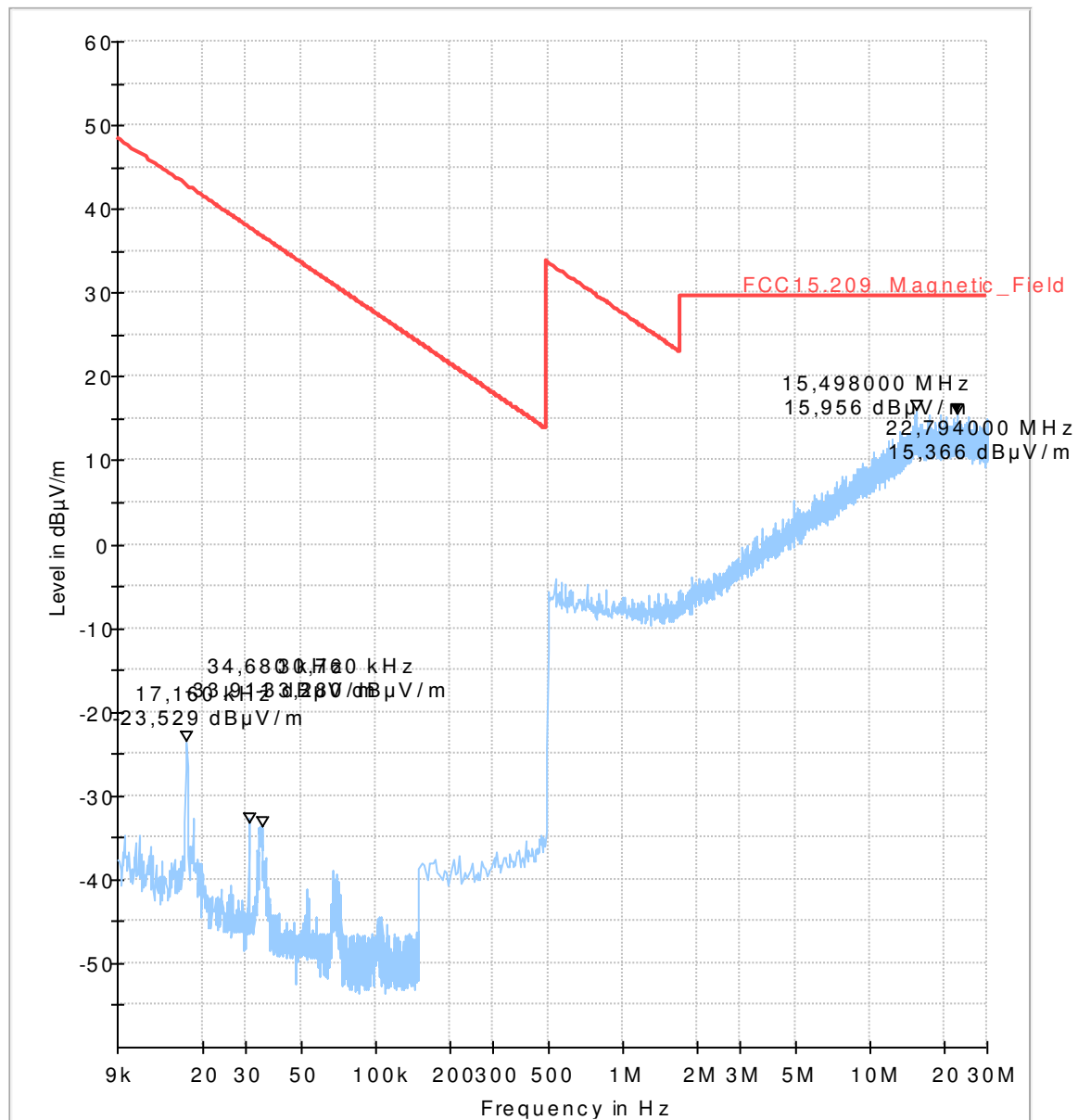
Full Spectrum



## Diagram No. 2.09\_R\_Ch\_23095\_BW\_5MHz

|                          |                                                                     |             |
|--------------------------|---------------------------------------------------------------------|-------------|
| Date:                    | 16.09.2016                                                          | Page 1 of 1 |
| Test description:        | Magnetic Field Strength Measurement related to 30/300 m distance    |             |
| Test site and distance:  | Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance |             |
| Version of Testsoftware: | EMC32 V9.25.0                                                       |             |
| Distance correction:     | used accord. table, pls. see test report                            |             |
| Technical Data:          | Please see page 2 for detailed data of measurement setup            |             |
| Rec. antenna (pre-scan): | height 1.00 m, parallel and 90° to EUT polarisation                 |             |
| Used filter:             | bypass                                                              |             |
| Test specification:      | FCC 15.205 § 15.209; RSS-Gen: Issue 4                               |             |
| Operator:                | Klv                                                                 |             |
| Operating conditions:    | TX-on                                                               |             |
| Power during tests:      | 12V DC, 110V/60Hz                                                   |             |
| Comment 1:               | Channel: 23095                                                      |             |
| Comment 2:               | LTE Band 12 Modulation: QPSK                                        |             |

# Full Spectrum



**Diagram No. 2.10\_R\_Ch\_23155\_BW\_5MHz**

Test description:

Test site and distance:

Version of Testsoftware:

Distance correction:

Technical Data:

Rec. antenna (pre-scan):

Used filter:

Test specification:

Date: 16.09.2016 Page 1 of 1

Magnetic Field Strength Measurement related to 30/300 m distance

Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3 m measurement distance

EMC32 V9.25.0

used accord. table, pls. see test report

Please see page 2 for detailed data of measurement setup

height 1.00 m, parallel and 90° to EUT polarisation

bypass

FCC 15.205 § 15.209; RSS-Gen: Issue 4

Operator:

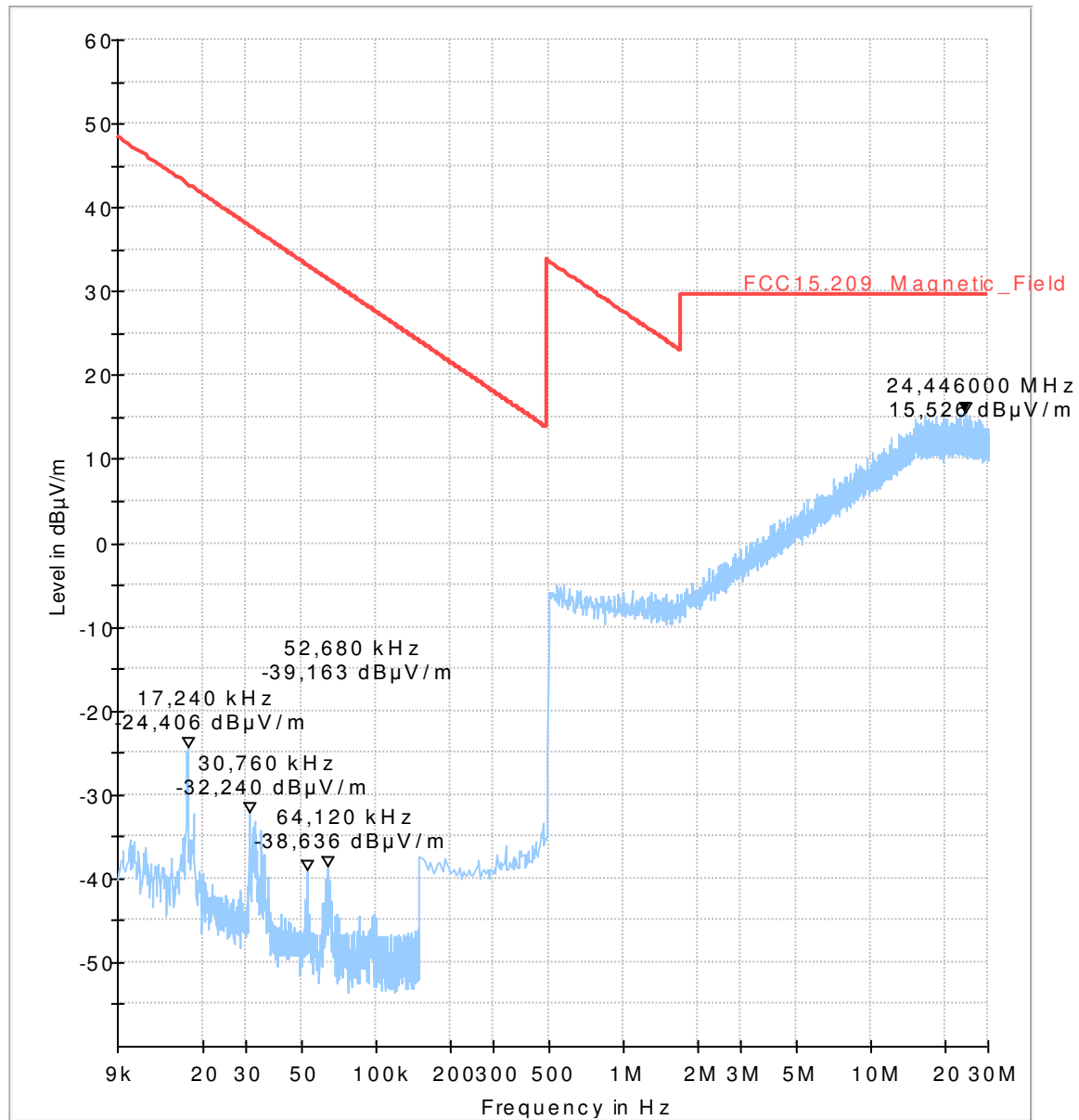
Operating conditions:

Klv

TX-on

Power during tests: 12V DC, 110V/60Hz  
 Comment 1: Channel: 23155  
 Comment 2:

## Full Spectrum



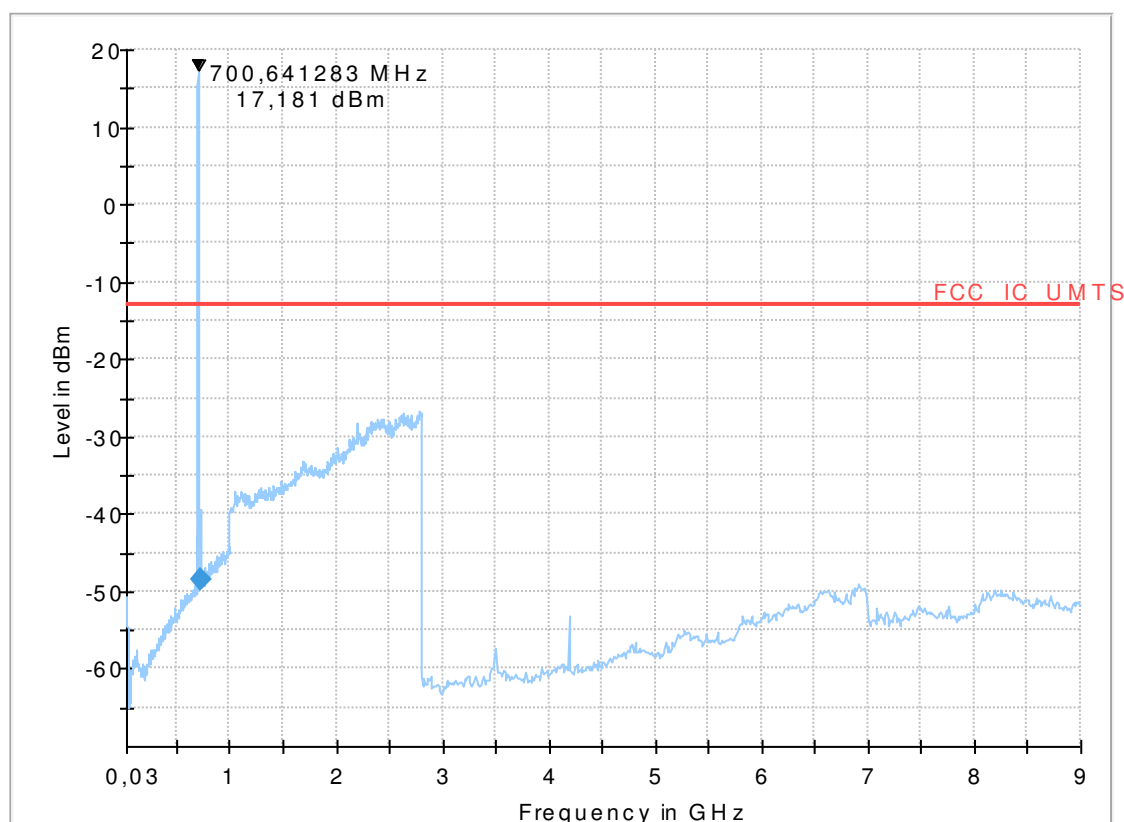
## 1.11. Spurious emissions radiated (LTE Band 12)

### 8.120\_TX\_Ch23035\_1RB<sub>low</sub>\_QPSK

#### Common Information

|                           |                                                            |
|---------------------------|------------------------------------------------------------|
| Test Description:         | Radiated Spurious Emissions Part 27                        |
| Test Site Location:       | CETECOM GmbH Essen                                         |
| Test Site:                | Fully Anechoic Room (FAR)                                  |
| Test Standard:            | FCC Part 27/RSS-139                                        |
| Comm. Link:               | LTE12                                                      |
| Operating Mode:           | MS allocated channel 23035/ QPSK / 1RB low/ 5MHz Signal BW |
| Exclusionband:            |                                                            |
| Environmental Conditions: | Humidity: 48%rH; Temperature: 20°C                         |
| Operator:                 |                                                            |

Full Spectrum



#### Final Result

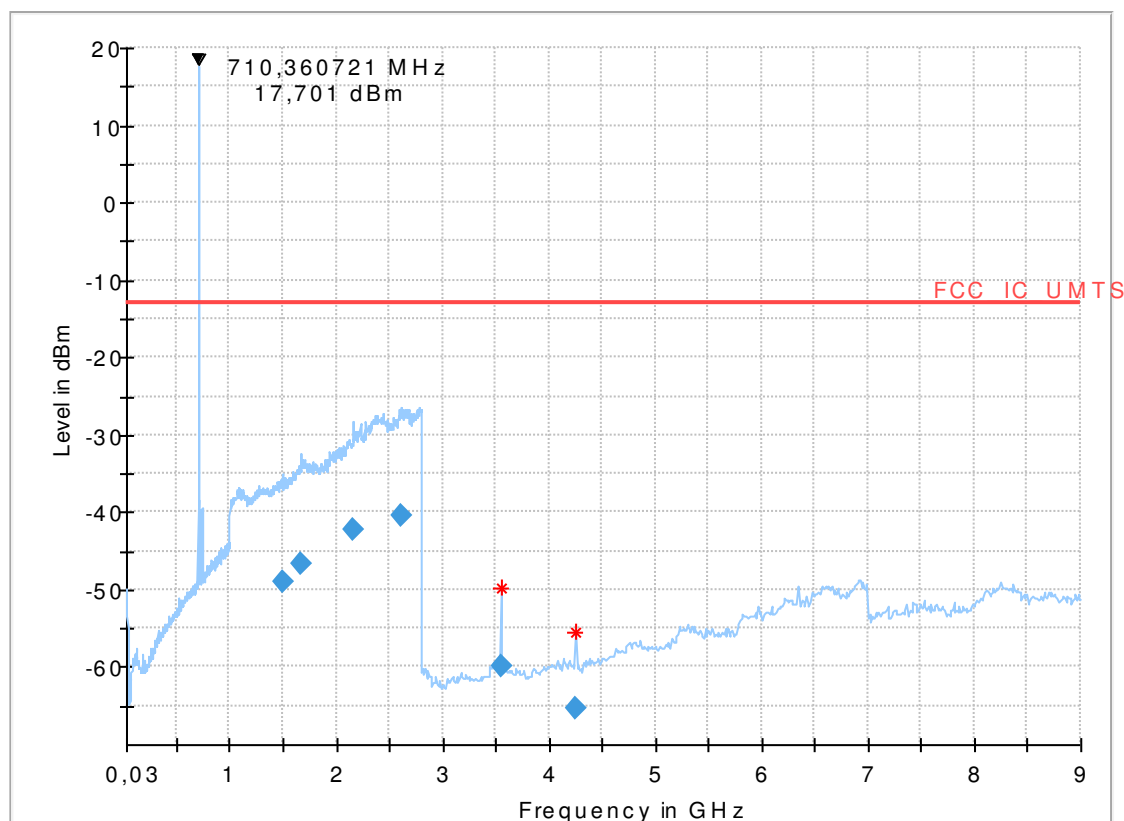
| Frequency (MHz) | Limit (dBm) | Margin (dB) | Meas. Time (ms) | Pol | Azimuth (deg) | Elevation (deg) | Corr. (dB) |
|-----------------|-------------|-------------|-----------------|-----|---------------|-----------------|------------|
| 729.529058      | -           | 35.48       | 1000.0          | H   | 342.0         | 90.0            | -77.0      |

## 8.121\_TX\_Ch23095\_1RB<sub>high</sub>\_QPSK

### Common Information

|                           |                                       |
|---------------------------|---------------------------------------|
| Test Description:         | Radiated Spurious Emissions UMTS FDDV |
| Test Site Location:       | CETECOM GmbH Essen                    |
| Test Site:                | Fully Anechoic Room (FAR)             |
| Test Standard:            | FCC Part 22.917(a)                    |
| Operating Mode:           | UE allocated channel 23035            |
| Environmental Conditions: | Humidity: 48%rH; Temperature: 26.6°C  |
| Operator:                 |                                       |

### Full Spectrum



### Final Result

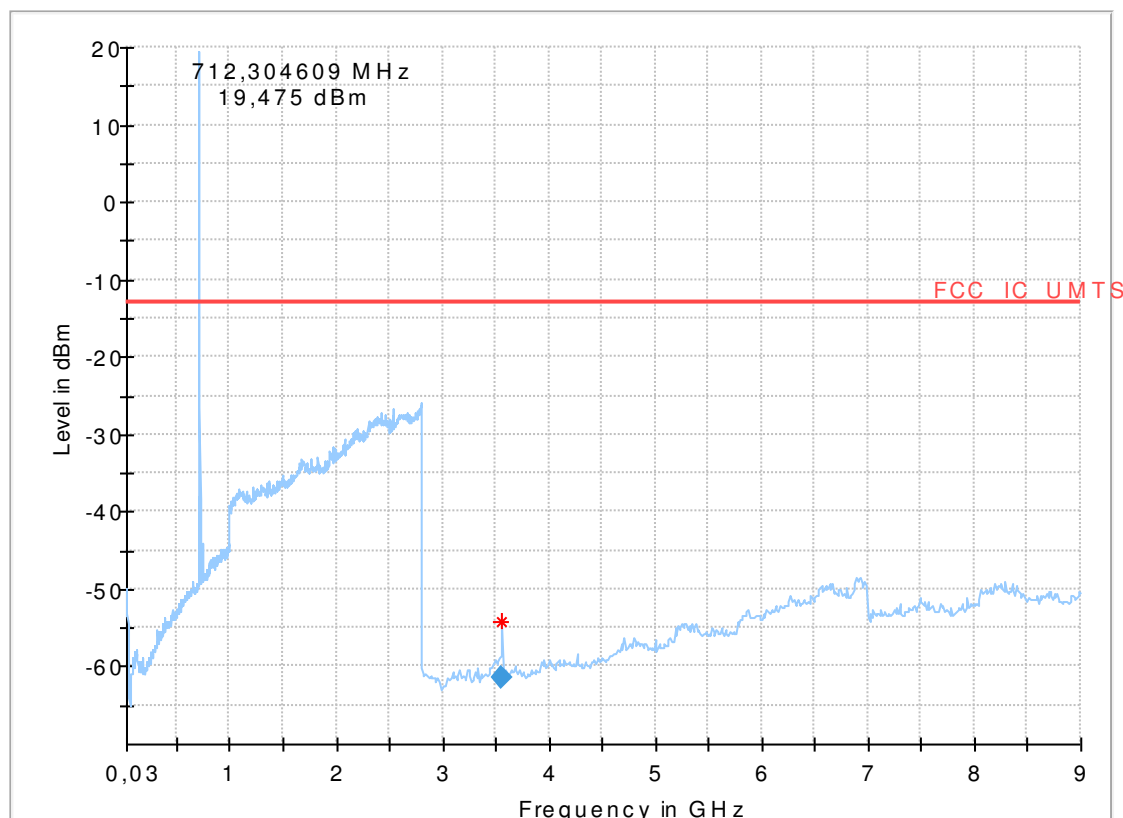
| Frequency (MHz) | Limit (dBm) | Margin (dB) | Meas. Time (ms) | Pol | Azimuth (deg) | Elevation (deg) | Corr. (dB) |
|-----------------|-------------|-------------|-----------------|-----|---------------|-----------------|------------|
| 1491.352705     | -           | 36.05       | 1000.0          | H   | 65.0          | 90.0            | -65.5      |
| 1674.478958     | -           | 33.62       | 1000.0          | H   | 136.0         | 0.0             | -63.1      |
| 2168.607215     | -           | 29.21       | 1000.0          | V   | 305.0         | 90.0            | -60.6      |
| 2619.569138     | -           | 27.38       | 1000.0          | V   | 311.0         | 90.0            | -58.8      |
| 3548.326653     | -           | 46.85       | 1000.0          | H   | 42.0          | 90.0            | -94.0      |
| 4258.006012     | -           | 52.36       | 1000.0          | V   | 45.0          | 90.0            | -93.5      |

## 8.122\_TX\_Ch23155\_5MHz\_1RB<sub>low</sub>\_QPSK

### Common Information

|                           |                                             |
|---------------------------|---------------------------------------------|
| Test Description:         | Radiated Spurious Emissions LTE FDD12       |
| Test Site Location:       | CETECOM GmbH Essen                          |
| Test Site:                | Fully Anechoic Room (FAR)                   |
| Test Standard:            | FCC Part 22.917(a)                          |
| Operating Mode:           | UE allocated channel 23155 (fc = 713.5 MHz) |
| Environmental Conditions: | Humidity: 50%rH; Temperature: 25°C          |
| Operator:                 | HLA                                         |

Full Spectrum



### Final Result

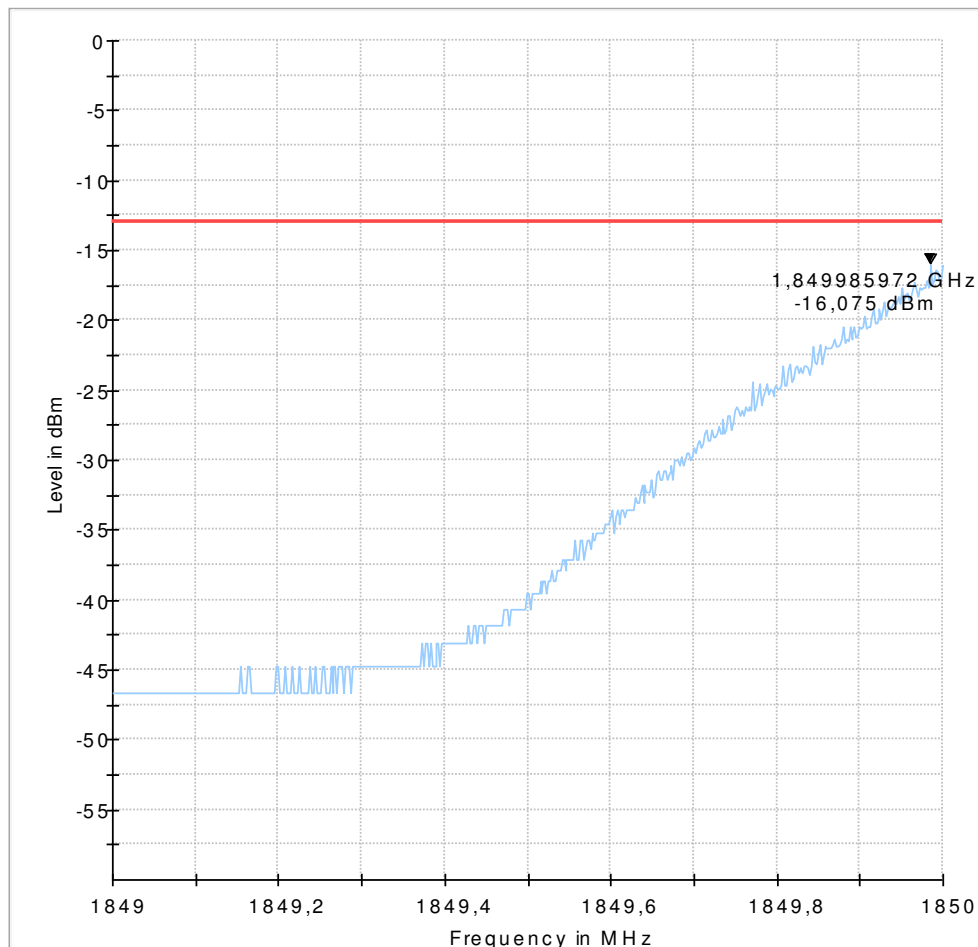
| Frequency (MHz) | Limit (dBm) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Elevation (deg) | Corr. (dB) |
|-----------------|-------------|-------------|-----------------|-----------------|-------------|-----|---------------|-----------------|------------|
| 3556.743487     | -           | 48.36       | 1000.0          | 100.000         | 155.0       | H   | 31.0          | 90.0            | -94.1      |

**1.12. Radiated emissions – band-edge (LTE Band 2)****1.12.1. Low Band-Edge 5MHz signal bandwidth****1.12.1.1. Channel 18625, QPSK, 1RB low position****Diagram No.: 9.24a\_BE\_R\_Ch18625\_1RB\_BW\_5\_QPSK****Common Information**

|                       |                                                                       |
|-----------------------|-----------------------------------------------------------------------|
| Test Description:     | Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance |
| Test Site:            | CETECOM GmbH Essen                                                    |
| Test Standard:        | FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 4             |
| Antenna polarisation: | horizontal/vertical                                                   |
| Operation mode:       | TX, continuous                                                        |
| Operator Name:        | RLs                                                                   |
| Comment:              | Channel no. low                                                       |

**EUT Information**

|                       |                  |
|-----------------------|------------------|
| Manufacturer:         | Gemalto M2M GmbH |
| EUT:                  | WMC0300EL0 (a)   |
| HW version:           | Rev01            |
| SW version:           | 4.3.3.0b         |
| SVN:                  | -                |
| Config:               | -                |
| IMEI:                 | 35541906031722   |
| Connected Interfaces: | -                |
| Power Supply:         | 12VDC over AE1   |
| Comments:             | -                |



#### 1.12.1.2. Channel 18625, 16-QAM, 1RB low position

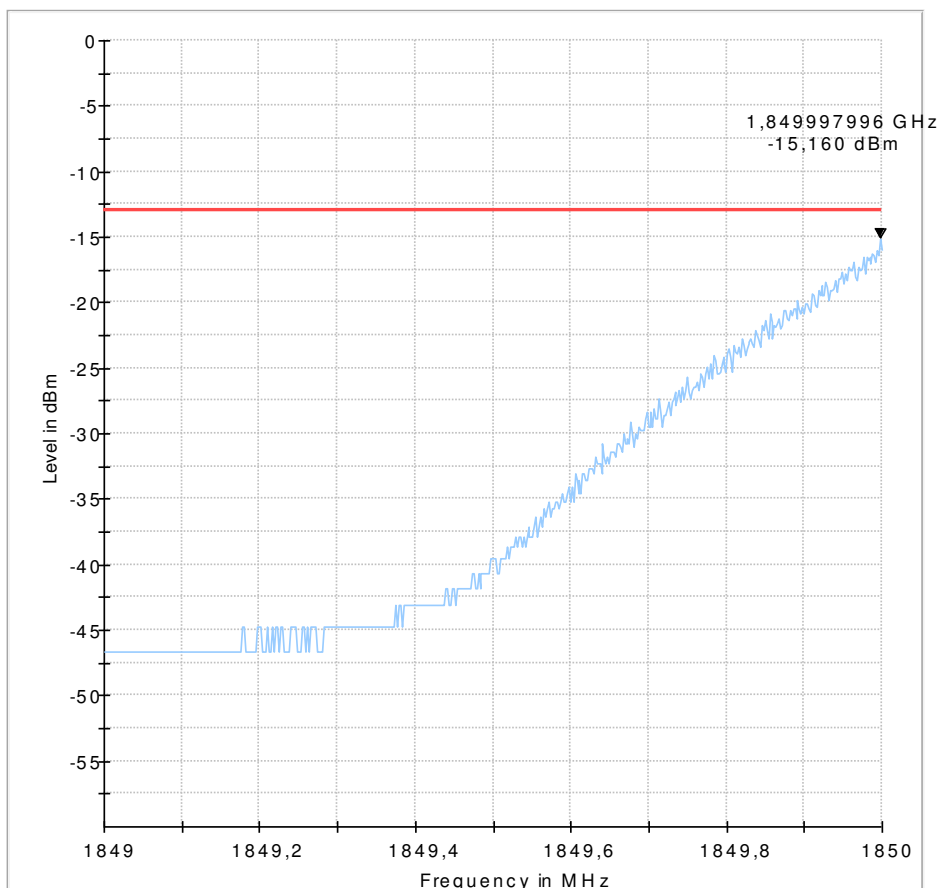
### Diagram No.: 9.25a\_BE\_R\_Ch18625\_1RB\_BW\_5\_QAM

#### Common Information

|                       |                                                                       |
|-----------------------|-----------------------------------------------------------------------|
| Test Description:     | Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance |
| Test Site:            | CETECOM GmbH Essen                                                    |
| Test Standard:        | FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 4             |
| Antenna polarisation: | horizontal/vertical                                                   |
| Operation mode:       | TX, continuous                                                        |
| Operator Name:        | RIs                                                                   |
| Comment:              | Channel no. low                                                       |

#### EUT Information

|                       |                  |
|-----------------------|------------------|
| Manufacturer:         | Gemalto M2M GmbH |
| EUT:                  | WMC0300EL0 (a)   |
| HW version:           | Rev01            |
| SW version:           | 4.3.3.0b         |
| SVN:                  | -                |
| Config:               | -                |
| IMEI:                 | 35541906031722   |
| Connected Interfaces: | -                |
| Power Supply:         | 12VDC over AE1   |
| Comments:             | -                |



### 1.12.1.3. Channel 18625, QPSK, 25 RBs

## Diagram No.: 9.26\_BE\_R\_Ch18625\_25RB\_BW\_5\_QPSK

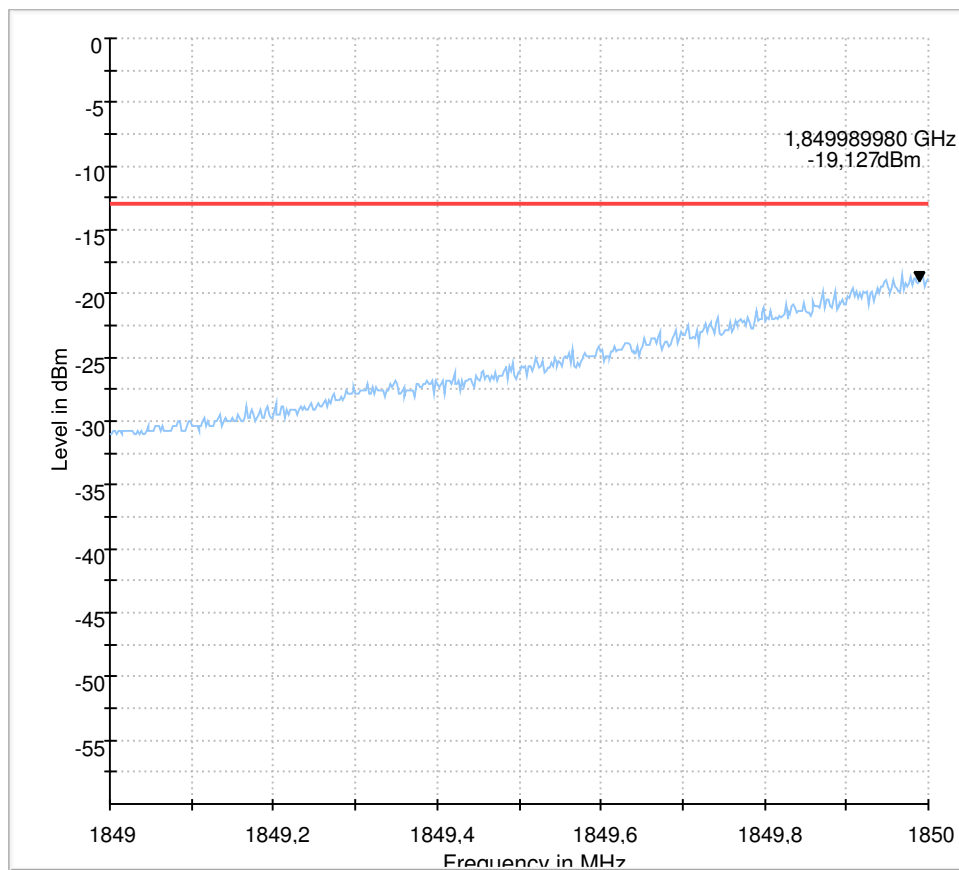
### Common Information

|                       |                                                                       |
|-----------------------|-----------------------------------------------------------------------|
| Test Description:     | Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance |
| Test Site:            | CETECOM GmbH Essen                                                    |
| Test Standard:        | FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 4             |
| Antenna polarisation: | horizontal/vertical                                                   |
| Operation mode:       | TX, continuous                                                        |
| Operator Name:        | Klv                                                                   |
| Comment:              | Channel no. 18625                                                     |
| Comment2:             | Modulation Type: QPSK 5MHz RB25                                       |

### EUT Information

|               |                  |
|---------------|------------------|
| Manufacturer: | Gemalto M2M GmbH |
| EUT:          | WMC0300EL0 (a)   |
| HW version:   | Rev01            |
| SW version:   | 4.3.3.0b         |
| SVN:          | -                |

Config: -  
IMEI: 35541906031722  
Connected Interfaces: -  
Power Supply: 12VDC over AE1  
Comments: -



#### 1.12.1.4. Channel 18625, 16-QAM, 25 RBs

### Diagram No.: 9.27\_BE\_R\_Ch18625\_25RB\_BW\_5\_QAM

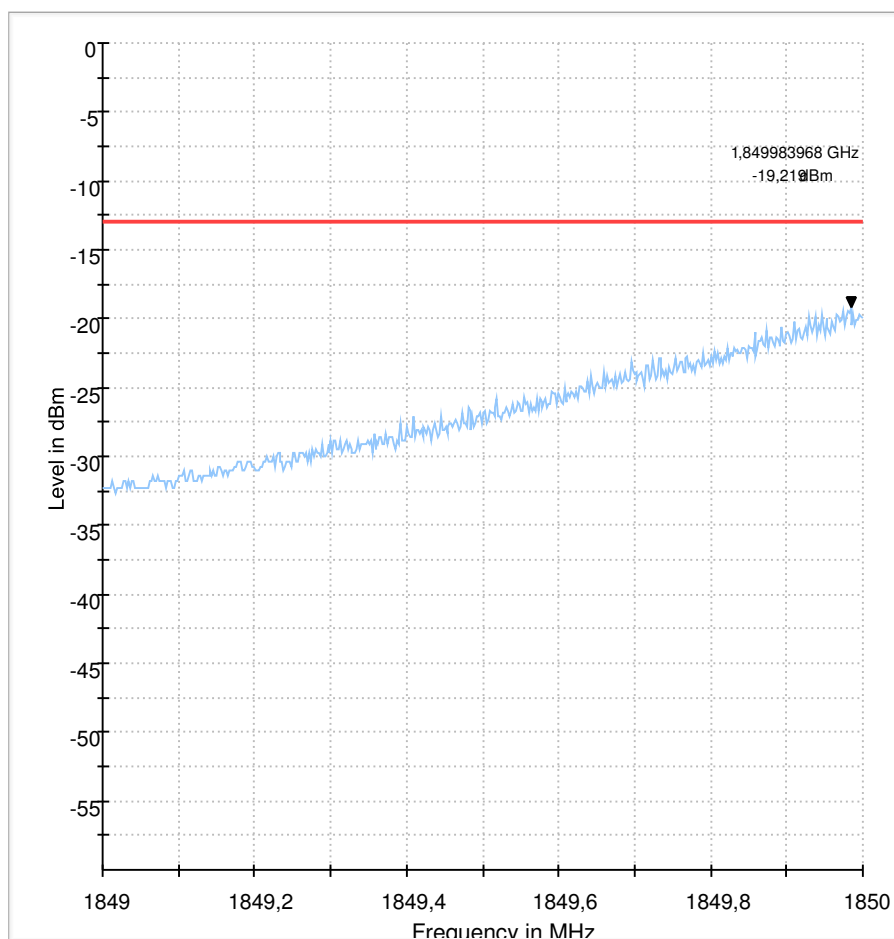
#### Common Information

|                       |                                                                       |
|-----------------------|-----------------------------------------------------------------------|
| Test Description:     | Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance |
| Test Site:            | CETECOM GmbH Essen                                                    |
| Test Standard:        | FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 4             |
| Antenna polarisation: | horizontal/vertical                                                   |
| Operation mode:       | TX, continuous                                                        |
| Operator Name:        | Klv                                                                   |
| Comment:              | Channel no. 18625                                                     |
| Comment2:             | Modulation Type: QAM 5MHz RB25                                        |

#### EUT Information

|               |                  |
|---------------|------------------|
| Manufacturer: | Gemalto M2M GmbH |
|---------------|------------------|

|                       |                |
|-----------------------|----------------|
| EUT:                  | WMC0300EL0 (a) |
| HW version:           | Rev01          |
| SW version:           | 4.3.3.0b       |
| SVN:                  | -              |
| Config:               | -              |
| IMEI:                 | 35541906031722 |
| Connected Interfaces: | -              |
| Power Supply:         | 12VDC over AE1 |
| Comments:             | -              |



## 1.12.2. High Band-Edge 5MHZ signal bandwidth

### 1.12.2.1. Channel 19175, QPSK, 1RB high position

## 9.28\_BE\_R\_Ch19175\_1RB\_BW\_5\_QPSK

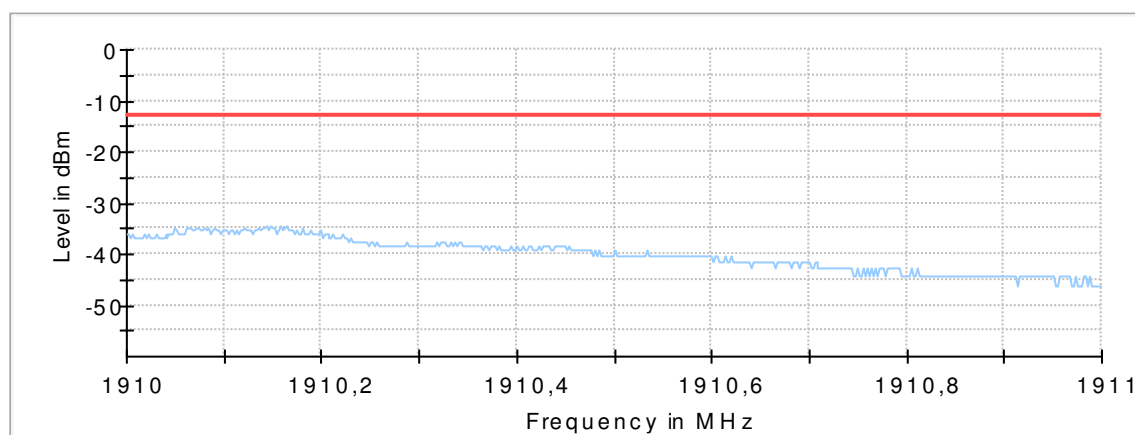
### Common Information

|                           |                                                           |
|---------------------------|-----------------------------------------------------------|
| Test Description:         | Band-Edge low - Radiated Spurious Emissions LTE Band 2    |
| Test Site Location:       | CETECOM GmbH Essen                                        |
| Test Site:                | Fully Anechoic Room (FAR)                                 |
| Test Standard:            | FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 4 |
| Comm. Link:               | LTE Band 2                                                |
| Operating Mode:           | MS allocated channel 19175                                |
| Environmental Conditions: | Humidity: 53%rH; Temperature: 24°C                        |
| Operator:                 | Klv                                                       |

## EUT Information

|                       |                  |
|-----------------------|------------------|
| Manufacturer:         | Gemalto M2M GmbH |
| EUT:                  | WMC0300EL0 (a)   |
| HW version:           | Rev01            |
| SW version:           | 4.3.3.0b         |
| SVN:                  | -                |
| Config:               | -                |
| IMEI:                 | 35541906031722   |
| Connected Interfaces: | -                |
| Power Supply:         | 12VDC over AE1   |
| Comments:             | -                |

Full Spectrum



### 1.12.2.2. Channel 19175, 16QAM, 1RB high position

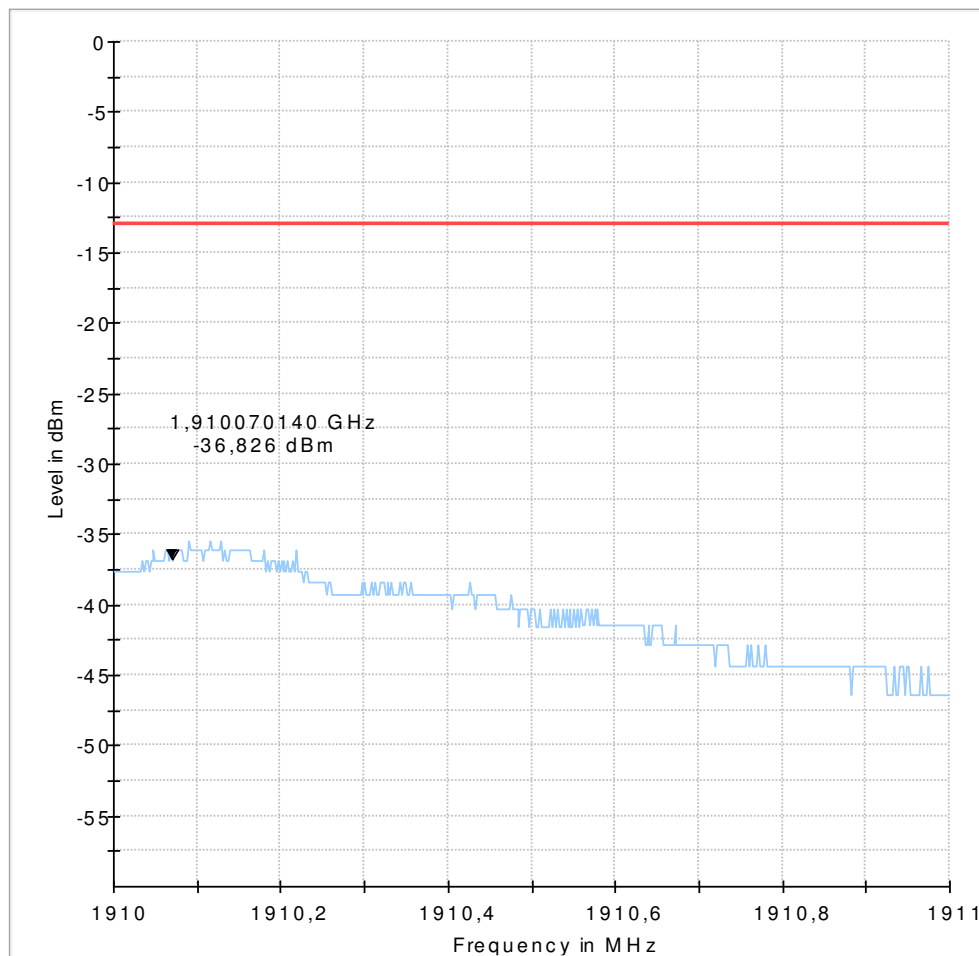
## Diagram No.: 9.29\_BE\_R\_Ch19175\_1RB\_BW\_5\_QAM

## Common Information

|                       |                                                                       |
|-----------------------|-----------------------------------------------------------------------|
| Test Description:     | Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance |
| Test Site:            | CETECOM GmbH Essen                                                    |
| Test Standard:        | FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 4             |
| Antenna polarisation: | horizontal/vertical                                                   |
| Operation mode:       | TX, continuous                                                        |
| Operator Name:        | Klv                                                                   |
| Comment:              | Channel no. 19175                                                     |
| Comment2:             | Modulation Type: QAM 5MHz RB1                                         |

## EUT Information

|                       |                  |
|-----------------------|------------------|
| Manufacturer:         | Gemalto M2M GmbH |
| EUT:                  | WMC0300EL0 (a)   |
| HW version:           | Rev01            |
| SW version:           | 4.3.3.0b         |
| SVN:                  | -                |
| Config:               | -                |
| IMEI:                 | 35541906031722   |
| Connected Interfaces: | -                |
| Power Supply:         | 12VDC over AE1   |
| Comments:             | -                |



### 1.12.2.3. Channel 18175, QPSK, 25RB high position

## Diagram No.: 9.30\_BE\_R\_Ch19175\_25RB\_BW\_5\_QPSK

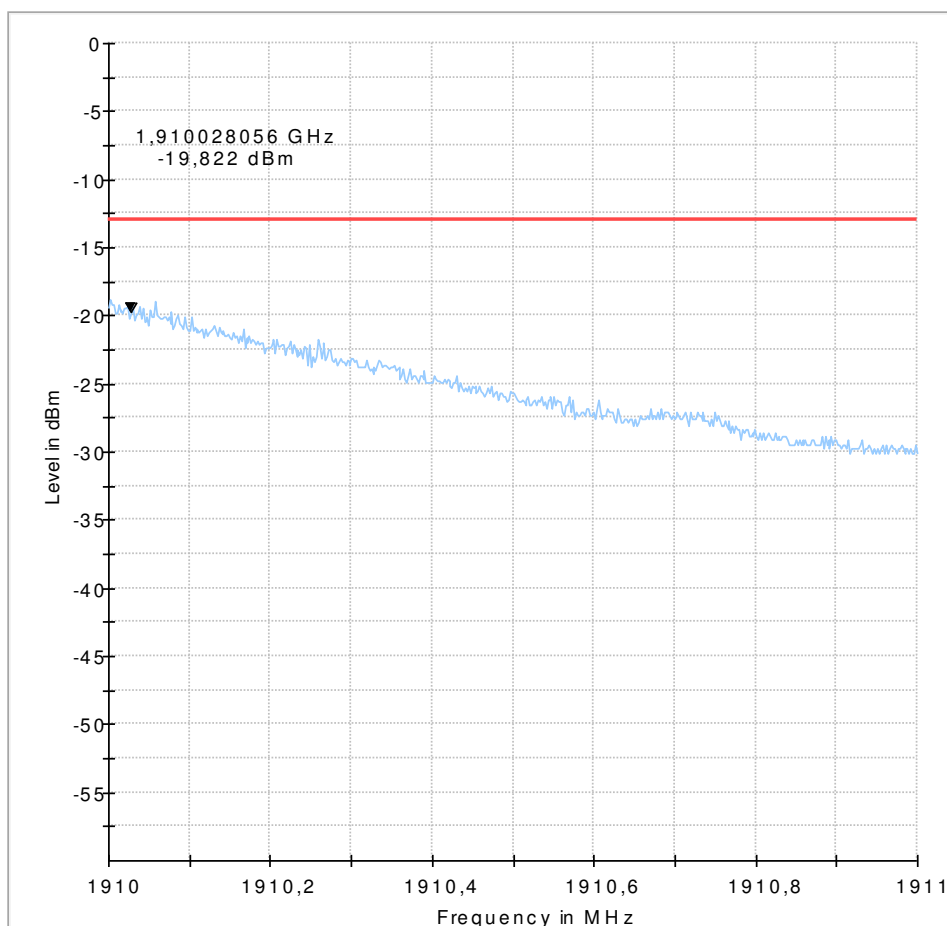
### Common Information

|                       |                                                                       |
|-----------------------|-----------------------------------------------------------------------|
| Test Description:     | Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance |
| Test Site:            | CETECOM GmbH Essen                                                    |
| Test Standard:        | FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 4             |
| Antenna polarisation: | horizontal/vertical                                                   |

|                 |                                 |
|-----------------|---------------------------------|
| Operation mode: | TX, continuous                  |
| Operator Name:  | Klv                             |
| Comment:        | Channel no. 19175               |
| Comment2:       | Modulation Type: QPSK 5MHz RB25 |

### EUT Information

|                       |                  |
|-----------------------|------------------|
| Manufacturer:         | Gemalto M2M GmbH |
| EUT:                  | WMC0300EL0 (a)   |
| HW version:           | Rev01            |
| SW version:           | 4.3.3.0b         |
| SVN:                  | -                |
| Config:               | -                |
| IMEI:                 | 35541906031722   |
| Connected Interfaces: | -                |
| Power Supply:         | 12VDC over AE1   |
| Comments:             | -                |



#### 1.12.2.4. Channel 19175, 16-QAM, 25RB high position

**Diagram No.: 9.31\_BE\_R\_Ch19175\_25RB\_BW\_5\_QAM**

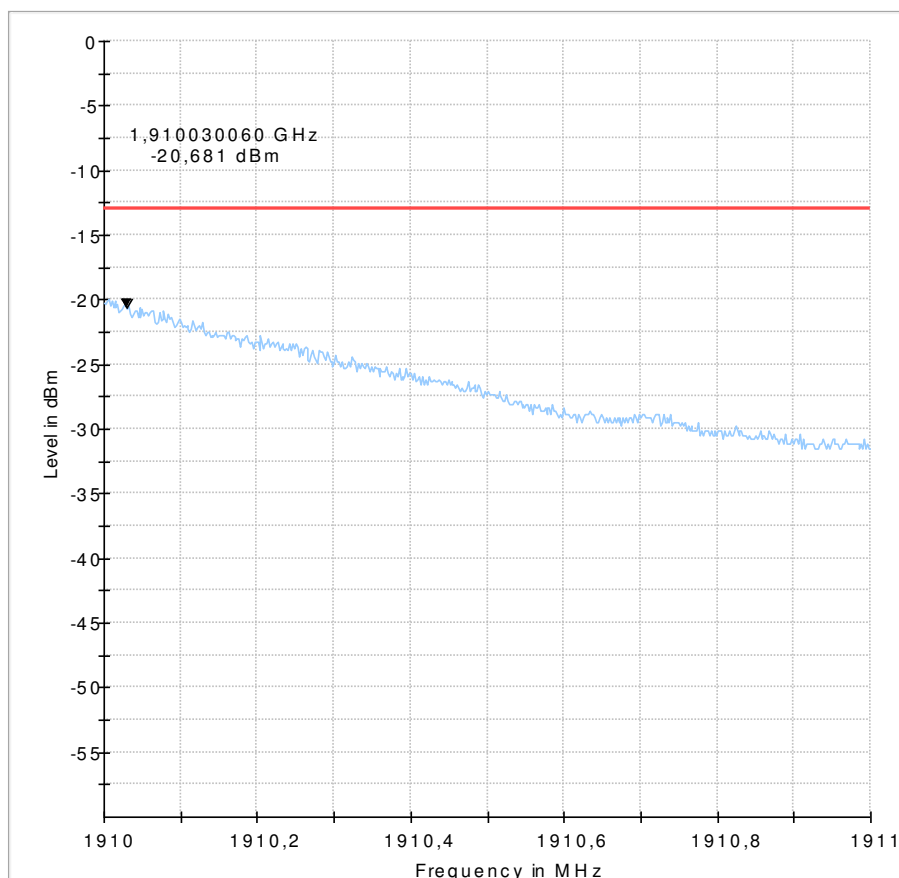
### Common Information

|                   |                                                                       |
|-------------------|-----------------------------------------------------------------------|
| Test Description: | Band-Edge: Radiated Field Strength Emissions Emissions in 3m distance |
|-------------------|-----------------------------------------------------------------------|

|                       |                                                           |
|-----------------------|-----------------------------------------------------------|
| Test Site:            | CETECOM GmbH Essen                                        |
| Test Standard:        | FCC 15.247&15.209 Intentional Radiator / RSS-Gen, Issue 4 |
| Antenna polarisation: | horizontal/vertical                                       |
| Operation mode:       | TX, continuous                                            |
| Operator Name:        | Klv                                                       |
| Comment:              | Channel no. 19175                                         |
| Comment2:             | Modulation Type: QAM 5MHz RB25                            |

## EUT Information

|                       |                  |
|-----------------------|------------------|
| Manufacturer:         | Gemalto M2M GmbH |
| EUT:                  | WMC0300EL0 (a)   |
| HW version:           | Rev01            |
| SW version:           | 4.3.3.0b         |
| SVN:                  | -                |
| Config:               | -                |
| IMEI:                 | 35541906031722   |
| Connected Interfaces: | -                |
| Power Supply:         | 12VDC over AE1   |
| Comments:             | -                |



## 1.13. Radiated emissions – band-edge (LTE Band 4) with signal bandwidth of 5MHz

### 1.13.1. Low Band-Edge 5MHz signal bandwidth

#### 1.13.1.1. Channel 19975, QPSK, 1RB low position

## 9.44\_BE\_R\_Ch19975\_1RBlow\_BW\_5\_QPSK

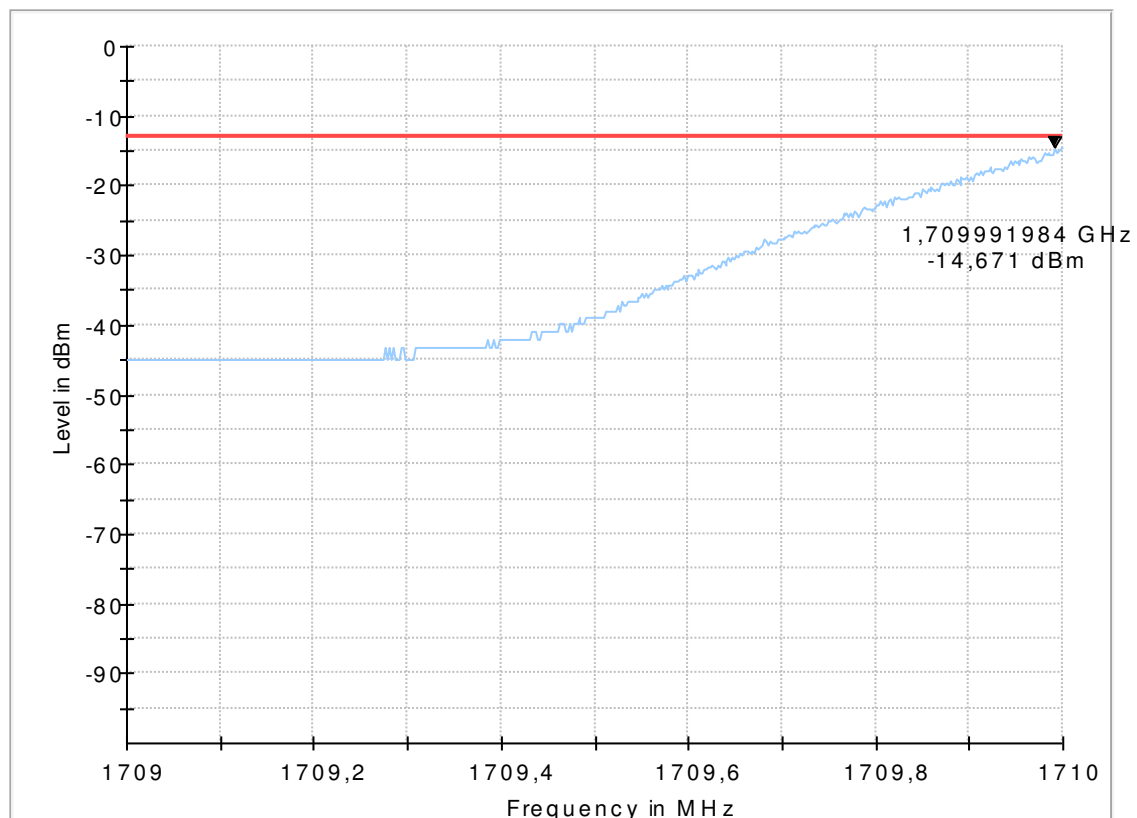
### Common Information

|                           |                                      |
|---------------------------|--------------------------------------|
| Test Description:         | Radiated Band Edge Compliance LTE B4 |
| Test Site Location:       | CETECOM GmbH Essen                   |
| Test Site:                | Fully Anechoic Room (FAR)            |
| Test Standard:            | FCC Part 27                          |
| Operating Mode:           | LTE Band 4 TX ch19975                |
| Exclusionband:            | --                                   |
| Environmental Conditions: | Humidity: 35%rH; Temperature: 22°C   |
| Operator:                 | RLs                                  |

### EUT Information

|                       |                  |
|-----------------------|------------------|
| Manufacturer:         | Gemalto M2M GmbH |
| EUT:                  | WMC0300EL0 (a)   |
| HW version:           | Rev01            |
| SW version:           | 4.3.3.0b         |
| SVN:                  | -                |
| Config:               | -                |
| IMEI:                 | 35541906031722   |
| Connected Interfaces: | -                |
| Power Supply:         | 12VDC over AE1   |
| Comments:             | -                |

Full Spectrum



### 1.13.1.2. Channel 19975, 16QAM, 1RB low position

## 9.45\_BE\_R\_Ch19975\_1RBlow\_BW\_5\_QAM

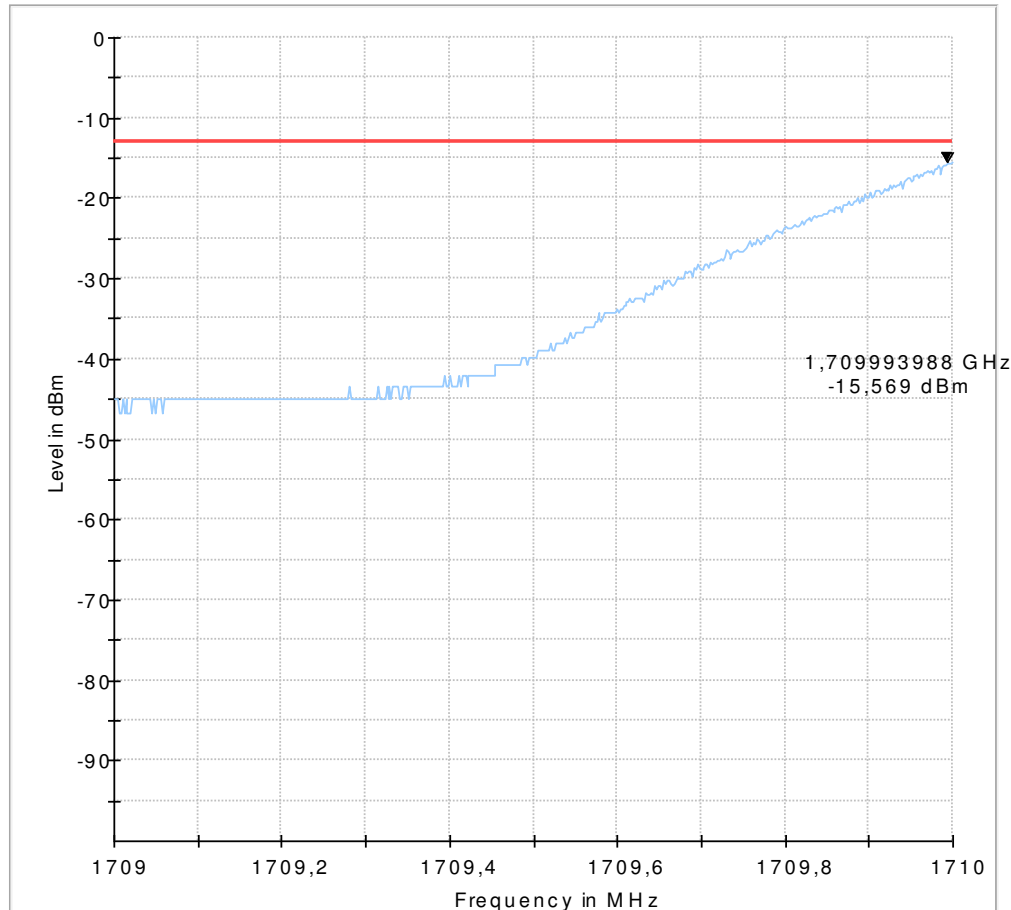
### Common Information

|                           |                                        |
|---------------------------|----------------------------------------|
| Test Description:         | Radiated Spurious Emissions LTE Band 4 |
| Test Site Location:       | CETECOM GmbH Essen                     |
| Test Site:                | Fully Anechoic Room (FAR)              |
| Test Standard:            | FCC Part 27                            |
| Comm. Link:               | LTE Band 4                             |
| Operating Mode:           | MS allocated channel 19975             |
| Exclusionband:            | -                                      |
| Environmental Conditions: | Humidity: 50%rH; Temperature: 20°C     |
| Operator:                 | RI's                                   |

### EUT Information

|                       |                  |
|-----------------------|------------------|
| Manufacturer:         | Gemalto M2M GmbH |
| EUT:                  | WMC0300EL0 (a)   |
| HW version:           | Rev01            |
| SW version:           | 4.3.3.0b         |
| SVN:                  | -                |
| Config:               | -                |
| IMEI:                 | 35541906031722   |
| Connected Interfaces: | -                |
| Power Supply:         | 12VDC over AE1   |
| Comments:             | -                |

Full Spectrum



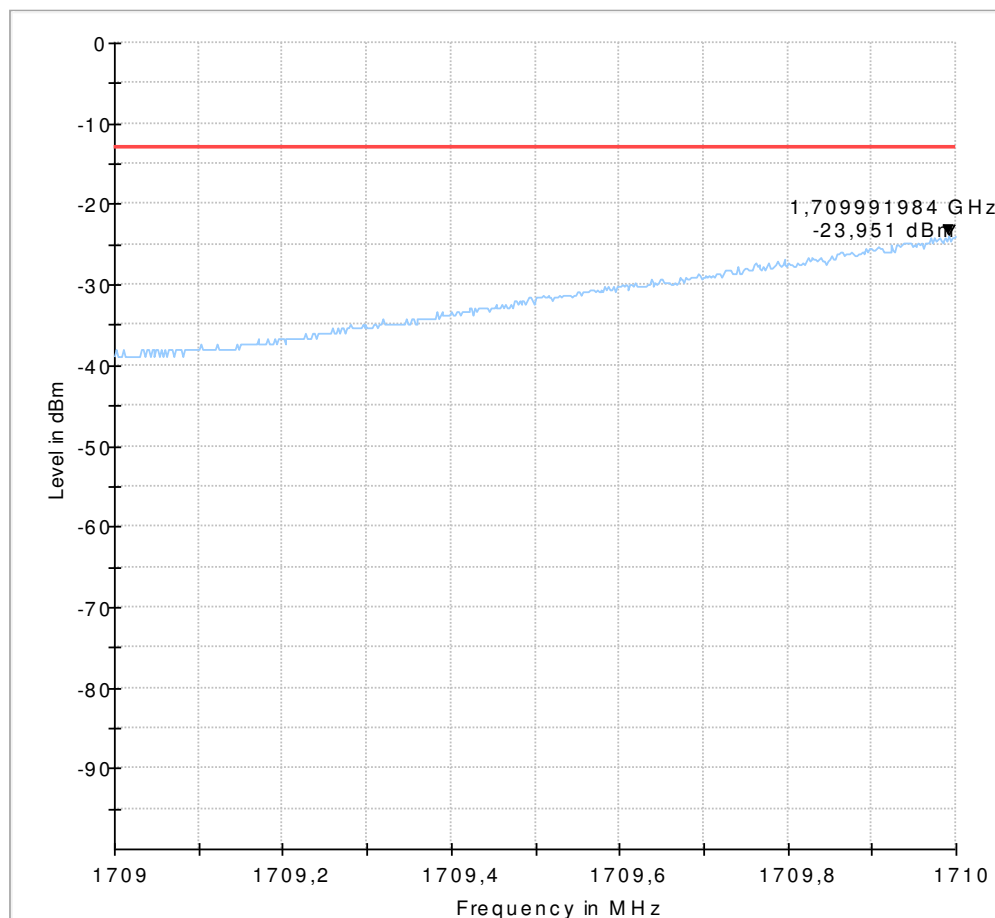
**1.13.1.3. Channel 19975, QPSK, 25 RBs low position****9.46\_BE\_R\_Ch19975\_25RBlow\_BW\_5\_QPSK****Common Information**

|                           |                                        |
|---------------------------|----------------------------------------|
| Test Description:         | Radiated Spurious Emissions LTE Band 4 |
| Test Site Location:       | CETECOM GmbH Essen                     |
| Test Site:                | Fully Anechoic Room (FAR)              |
| Test Standard:            | FCC Part 27                            |
| Comm. Link:               | LTE Band 4                             |
| Operating Mode:           | MS allocated channel 19975             |
| Exclusionband:            | -                                      |
| Environmental Conditions: | Humidity: 50%rH; Temperature: 20°C     |
| Operator:                 | RLs                                    |

**EUT Information**

|                       |                  |
|-----------------------|------------------|
| Manufacturer:         | Gemalto M2M GmbH |
| -----                 |                  |
| EUT:                  | WMC0300EL0 (a)   |
| HW version:           | Rev01            |
| SW version:           | 4.3.3.0b         |
| SVN:                  | -                |
| Config:               | -                |
| IMEI:                 | 35541906031722   |
| Connected Interfaces: | -                |
| Power Supply:         | 12VDC over AE1   |
| Comments:             | -                |

Full Spectrum



#### 1.13.1.4. Channel 19975, 16QAM, 25 RBs low position

### 9.47\_BE\_R\_Ch19975\_25RBlow\_BW\_5\_QAM

#### Common Information

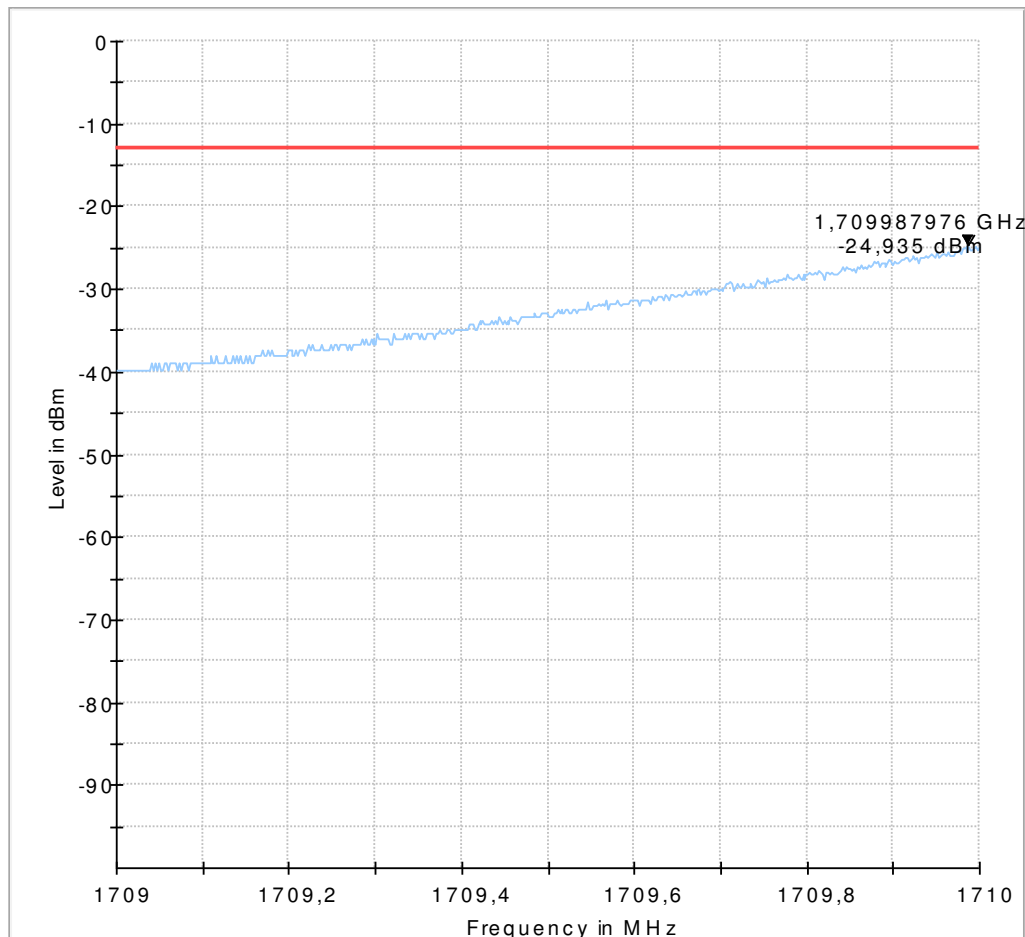
|                           |                                        |
|---------------------------|----------------------------------------|
| Test Description:         | Radiated Spurious Emissions LTE Band 4 |
| Test Site Location:       | CETECOM GmbH Essen                     |
| Test Site:                | Fully Anechoic Room (FAR)              |
| Test Standard:            | FCC Part 27                            |
| Comm. Link:               | LTE Band 4                             |
| Operating Mode:           | MS allocated channel 19975             |
| Exclusionband:            | -                                      |
| Environmental Conditions: | Humidity: 50%rH; Temperature: 20°C     |
| Operator:                 | RI                                     |

#### EUT Information

|                       |                  |
|-----------------------|------------------|
| Manufacturer:         | Gemalto M2M GmbH |
| EUT:                  | WMC0300EL0 (a)   |
| HW version:           | Rev01            |
| SW version:           | 4.3.3.0b         |
| SVN:                  | -                |
| Config:               | -                |
| IMEI:                 | 35541906031722   |
| Connected Interfaces: | -                |

Power Supply: 12VDC over AE1  
Comments: -

### Full Spectrum



### 1.13.2. High Band-Edge 5MHz signal bandwidth

#### 1.13.2.1. Channel 20375, QPSK, 1RB high position

## 9.48\_BE\_R\_Ch20375\_1RBhigh\_BW\_5\_QPSK

### Common Information

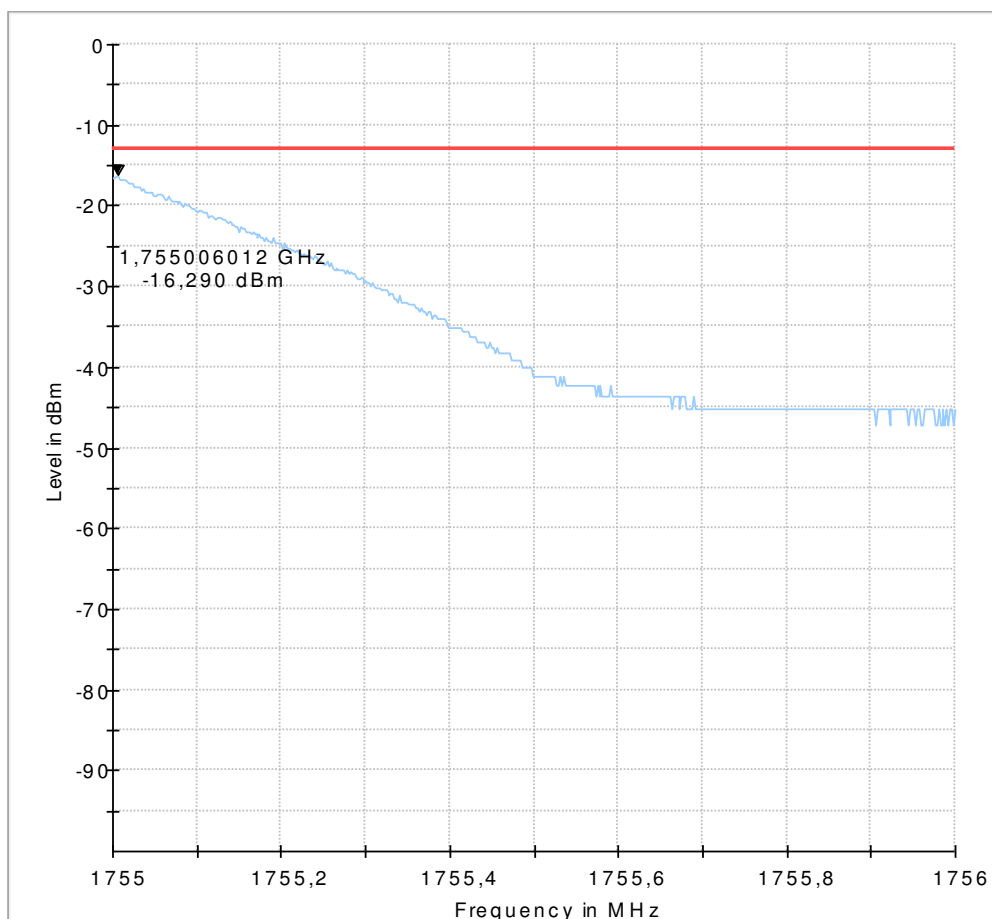
|                           |                                        |
|---------------------------|----------------------------------------|
| Test Description:         | Radiated Spurious Emissions LTE Band 4 |
| Test Site Location:       | CETECOM GmbH Essen                     |
| Test Site:                | Fully Anechoic Room (FAR)              |
| Test Standard:            | FCC Part 27                            |
| Comm. Link:               | LTE Band 4                             |
| Operating Mode:           | MS allocated channel 20375             |
| Exclusionband:            | --                                     |
| Environmental Conditions: | Humidity: 50%rH; Temperature: 20°C     |
| Operator:                 | RLs                                    |

### EUT Information

|               |                  |
|---------------|------------------|
| Manufacturer: | Gemalto M2M GmbH |
| EUT:          | WMC0300EL0 (a)   |

|                       |                |
|-----------------------|----------------|
| HW version:           | Rev01          |
| SW version:           | 4.3.3.0b       |
| SVN:                  | -              |
| Config:               | -              |
| IMEI:                 | 35541906031722 |
| Connected Interfaces: | -              |
| Power Supply:         | 12VDC over AE1 |
| Comments:             | -              |

#### Full Spectrum



#### 1.13.2.2. Channel 20375, 16QAM, 1RB high position

### 9.49\_BE\_R\_Ch20375\_1RBhigh\_BW\_5\_QAM

#### Common Information

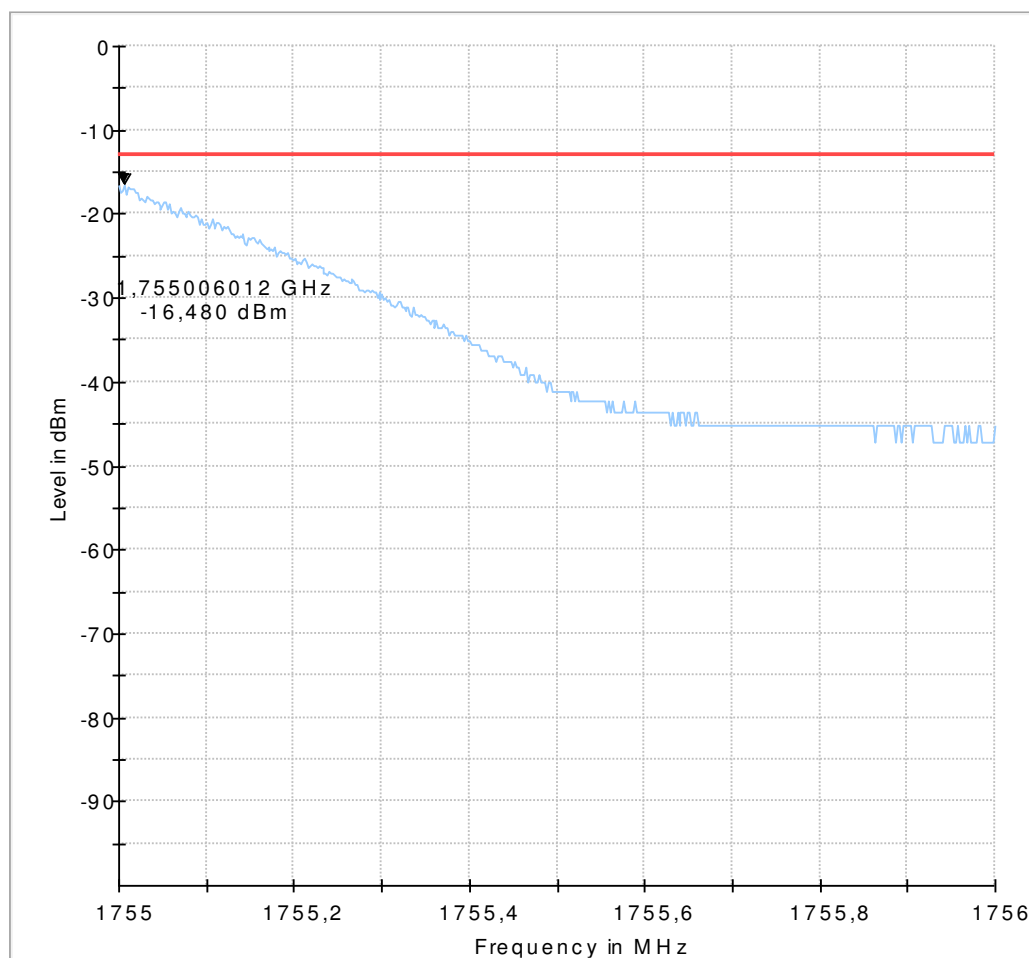
|                           |                                        |
|---------------------------|----------------------------------------|
| Test Description:         | Radiated Spurious Emissions LTE Band 4 |
| Test Site Location:       | CETECOM GmbH Essen                     |
| Test Site:                | Fully Anechoic Room (FAR)              |
| Test Standard:            | FCC Part 27                            |
| Comm. Link:               | LTE Band 4                             |
| Operating Mode:           | MS allocated channel 20375             |
| Exclusionband:            | --                                     |
| Environmental Conditions: | Humidity: 50%rH; Temperature: 20°C     |
| Operator:                 | RI                                     |

#### EUT Information

|               |                  |
|---------------|------------------|
| Manufacturer: | Gemalto M2M GmbH |
|---------------|------------------|

|                       |                |
|-----------------------|----------------|
| EUT:                  | WMC0300EL0 (a) |
| HW version:           | Rev01          |
| SW version:           | 4.3.3.0b       |
| SVN:                  | -              |
| Config:               | -              |
| IMEI:                 | 35541906031722 |
| Connected Interfaces: | -              |
| Power Supply:         | 12VDC over AE1 |
| Comments:             | -              |

Full Spectrum



### 1.13.2.3. Channel 20375, QPSK, 25 RBs high position

## 9.50\_BE\_R\_Ch20375\_25RBhigh\_BW\_5\_QPSK

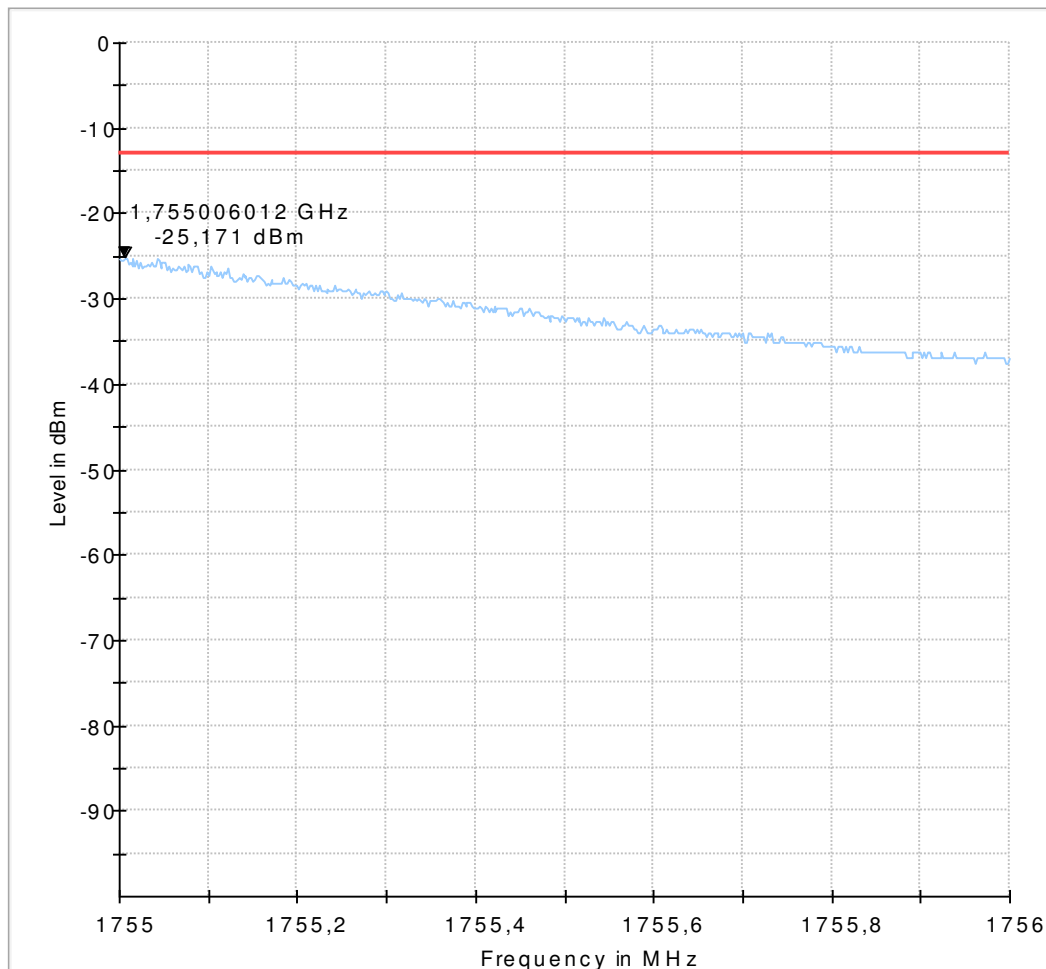
### Common Information

|                           |                                        |
|---------------------------|----------------------------------------|
| Test Description:         | Radiated Spurious Emissions LTE Band 4 |
| Test Site Location:       | CETECOM GmbH Essen                     |
| Test Site:                | Fully Anechoic Room (FAR)              |
| Test Standard:            | FCC Part 27                            |
| Comm. Link:               | LTE Band 4                             |
| Operating Mode:           | MS allocated channel 20375             |
| Exclusionband:            | --                                     |
| Environmental Conditions: | Humidity: 50%rH; Temperature: 20°C     |
| Operator:                 | RI                                     |

## EUT Information

|                       |                  |
|-----------------------|------------------|
| Manufacturer:         | Gemalto M2M GmbH |
| EUT:                  | WMC0300EL0 (a)   |
| HW version:           | Rev01            |
| SW version:           | 4.3.3.0b         |
| SVN:                  | -                |
| Config:               | -                |
| IMEI:                 | 35541906031722   |
| Connected Interfaces: | -                |
| Power Supply:         | 12VDC over AE1   |
| Comments:             | -                |

## Full Spectrum



### 1.13.2.4. Channel 20375, 16QAM, 25RB high position

## 9.51\_BE\_R\_Ch20375\_25RBhigh\_BW\_5\_QAM

## Common Information

|                     |                                        |
|---------------------|----------------------------------------|
| Test Description:   | Radiated Spurious Emissions LTE Band 4 |
| Test Site Location: | CETECOM GmbH Essen                     |
| Test Site:          | Fully Anechoic Room (FAR)              |
| Test Standard:      | FCC Part 27                            |
| Comm. Link:         | LTE Band 4                             |
| Operating Mode:     | MS allocated channel 20375             |
| Exclusionband:      | --                                     |

Environmental Conditions:  
Operator:

Humidity: 50%rH; Temperature: 20°C  
RIs

## EUT Information

Manufacturer:

Gemalto M2M GmbH

EUT:

WMC0300EL0 (a)

HW version:

Rev01

SW version:

4.3.3.0b

SVN:

-

Config:

-

IMEI:

35541906031722

Connected Interfaces:

-

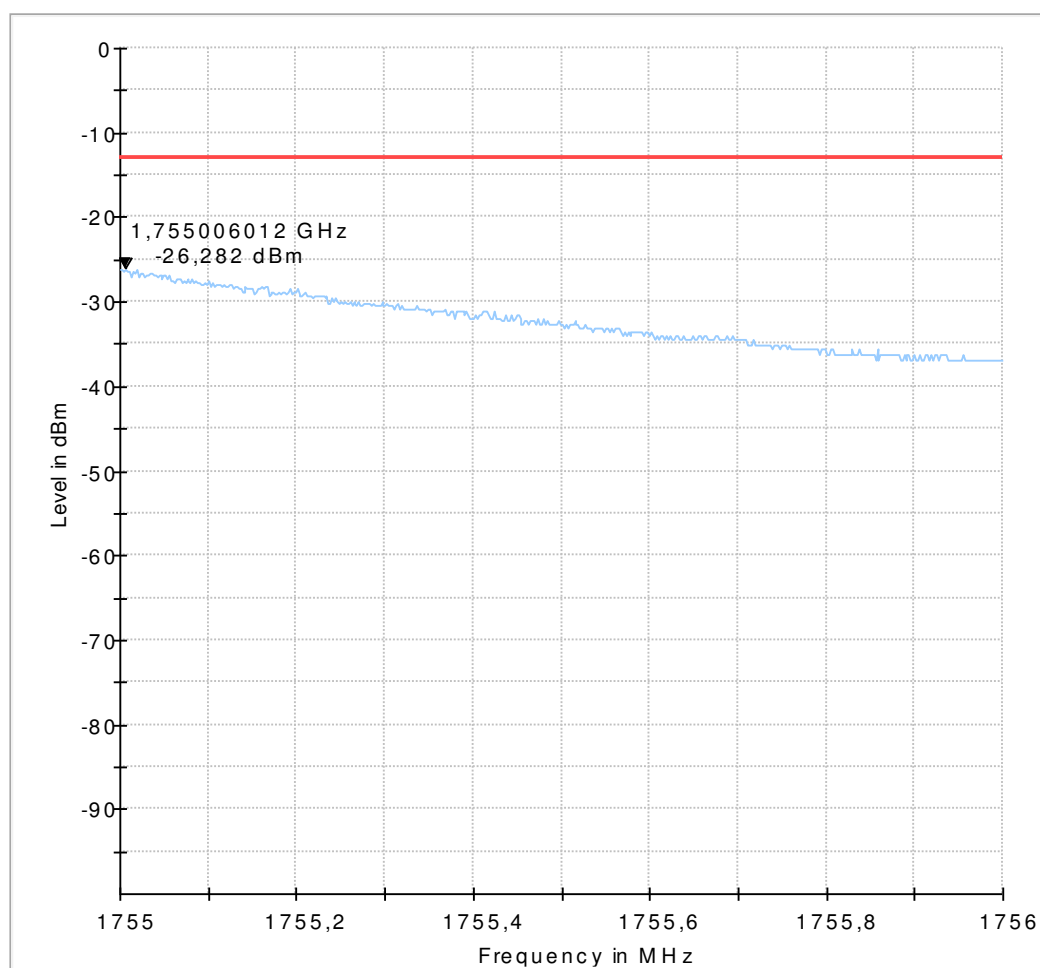
Power Supply:

12VDC over AE1

Comments:

-

## Full Spectrum



## 1.14. Radiated emissions – band-edge (LTE Band 12)

### 1.14.1. Low Band-Edge 5MHz signal bandwidth

#### 1.14.1.1. Channel 23025, QPSK, 1RB low position

### 9.01\_BE\_R\_CH23025\_QPSK\_1RBlow\_5MHz

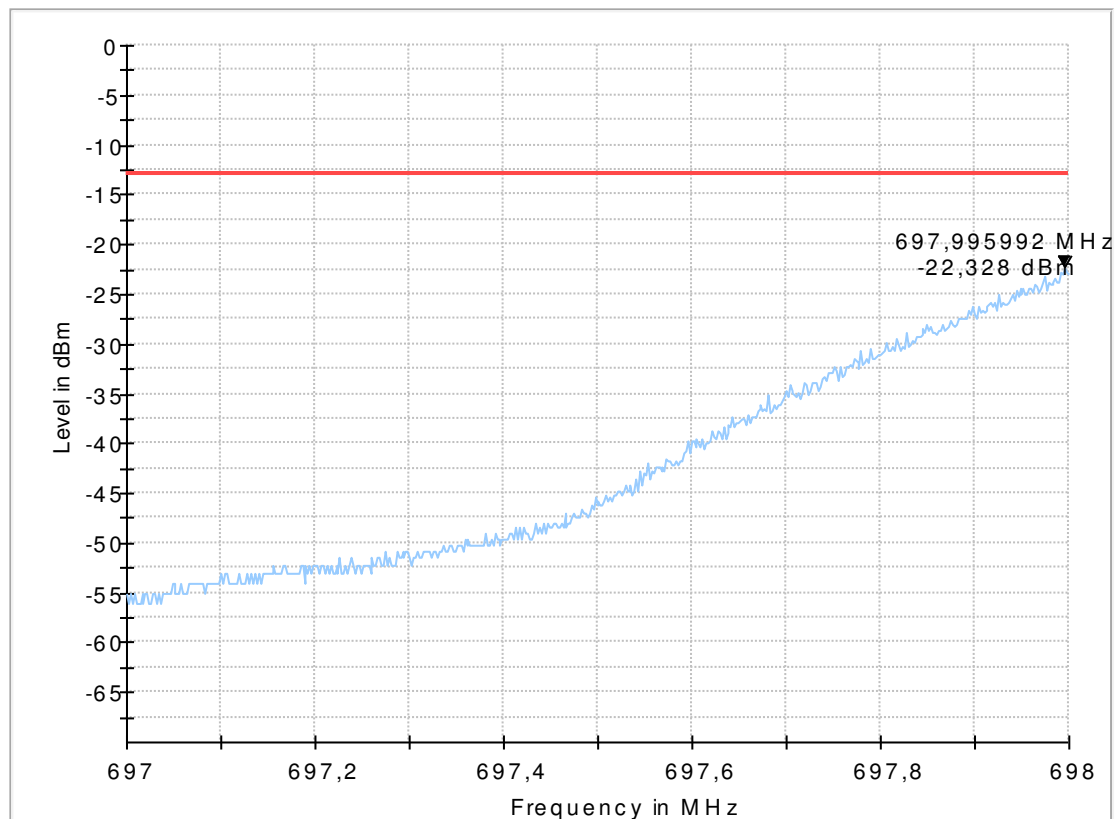
#### Common Information

|                           |                                       |
|---------------------------|---------------------------------------|
| Test Description:         | Radiated Band Edge Compliance LTE B12 |
| Test Site Location:       | CETECOM GmbH Essen                    |
| Test Site:                | Fully Anechoic Room (FAR)             |
| Test Standard:            | FCC Part 27                           |
| Operating Mode:           | LTE Band 12 TX ch23025                |
| Exclusionband:            | --                                    |
| Environmental Conditions: | Humidity: 35%rH; Temperature: 22°C    |
| Operator:                 | RI                                    |

#### EUT Information

|                       |                  |
|-----------------------|------------------|
| Manufacturer:         | Gemalto M2M GmbH |
| EUT:                  | WMC0300EL0 (a)   |
| HW version:           | Rev01            |
| SW version:           | 4.3.3.0b         |
| SVN:                  | -                |
| Config:               | -                |
| IMEI:                 | 35541906031722   |
| Connected Interfaces: | -                |
| Power Supply:         | 12VDC over AE1   |
| Comments:             | -                |

Full Spectrum



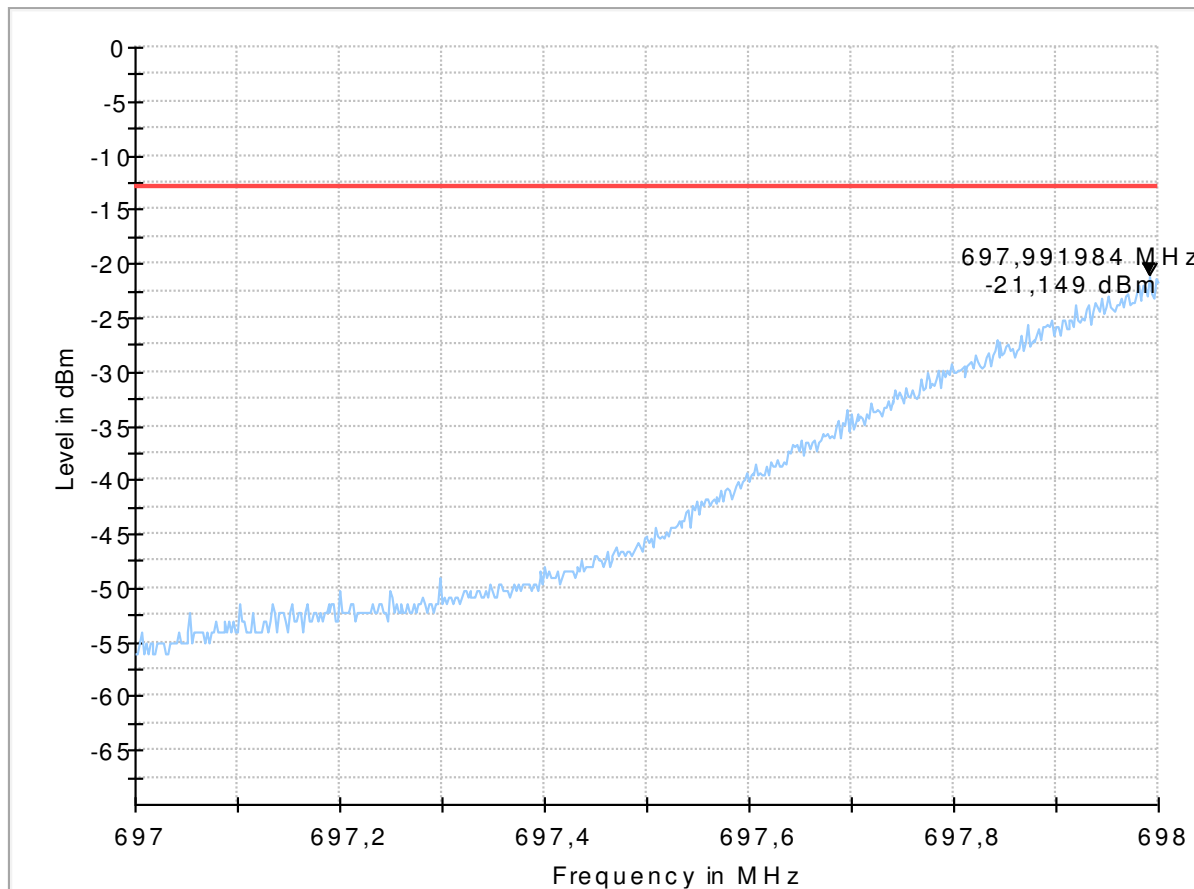
**1.14.1.2. Channel 23025, 16QAM, 1RB low position****9.02\_BE\_R\_CH23035\_QAM\_1RBlow\_5MHz****Common Information**

|                           |                                       |
|---------------------------|---------------------------------------|
| Test Description:         | Radiated Band Edge Compliance LTE B12 |
| Test Site Location:       | CETECOM GmbH Essen                    |
| Test Site:                | Fully Anechoic Room (FAR)             |
| Test Standard:            | FCC Part 27                           |
| Operating Mode:           | LTE Band 12 TX ch23035                |
| Exclusionband:            | --                                    |
| Environmental Conditions: | Humidity: 35%rH; Temperature: 22°C    |
| Operator:                 | RI                                    |

**EUT Information**

|                       |                  |
|-----------------------|------------------|
| Manufacturer:         | Gemalto M2M GmbH |
| -----                 | -----            |
| EUT:                  | WMC0300EL0 (a)   |
| HW version:           | Rev01            |
| SW version:           | 4.3.3.0b         |
| SVN:                  | -                |
| Config:               | -                |
| IMEI:                 | 35541906031722   |
| Connected Interfaces: | -                |
| Power Supply:         | 12VDC over AE1   |
| Comments:             | -                |

### Full Spectrum



#### 1.14.1.3. Channel 23025, QPSK, 25 RBs low position

### 9.03\_BE\_R\_CH23035\_QPSK\_25RBlow\_5MHz

#### Common Information

|                           |                                       |
|---------------------------|---------------------------------------|
| Test Description:         | Radiated Band Edge Compliance LTE B12 |
| Test Site Location:       | CETECOM GmbH Essen                    |
| Test Site:                | Fully Anechoic Room (FAR)             |
| Test Standard:            | FCC Part 27                           |
| Operating Mode:           | LTE Band 12 TX ch23035                |
| Exclusionband:            | --                                    |
| Environmental Conditions: | Humidity: 35%rH; Temperature: 22°C    |
| Operator:                 | RI                                    |

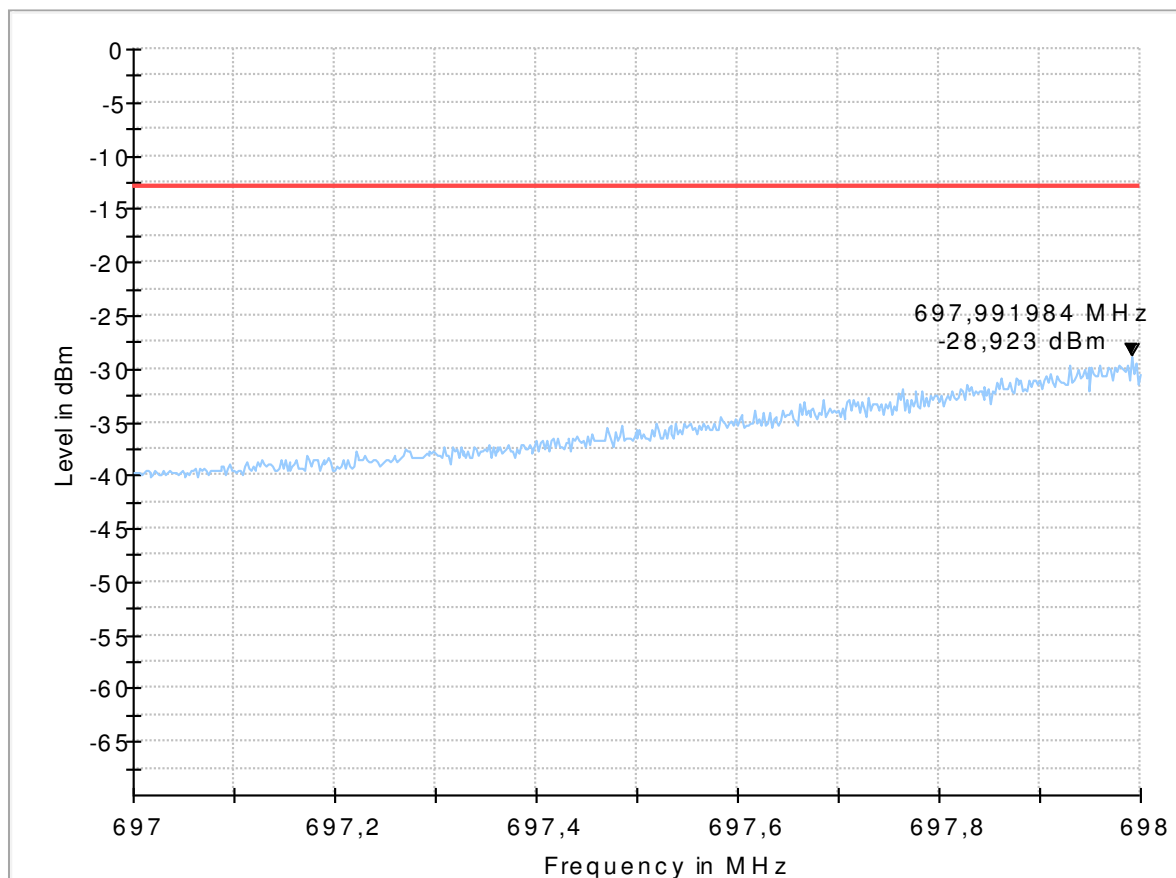
#### EUT Information

|                       |                  |
|-----------------------|------------------|
| Manufacturer:         | Gemalto M2M GmbH |
| EUT:                  | WMC0300EL0 (a)   |
| HW version:           | Rev01            |
| SW version:           | 4.3.3.0b         |
| SVN:                  | -                |
| Config:               | -                |
| IMEI:                 | 35541906031722   |
| Connected Interfaces: | -                |
| Power Supply:         | 12VDC over AE1   |

Comments:

-

### Full Spectrum



#### 1.14.1.4. Channel 23025, 16QAM, 25RBs low position

### 9.04\_BE\_R\_CH23035\_QAM\_25RBlow\_5MHz

#### Common Information

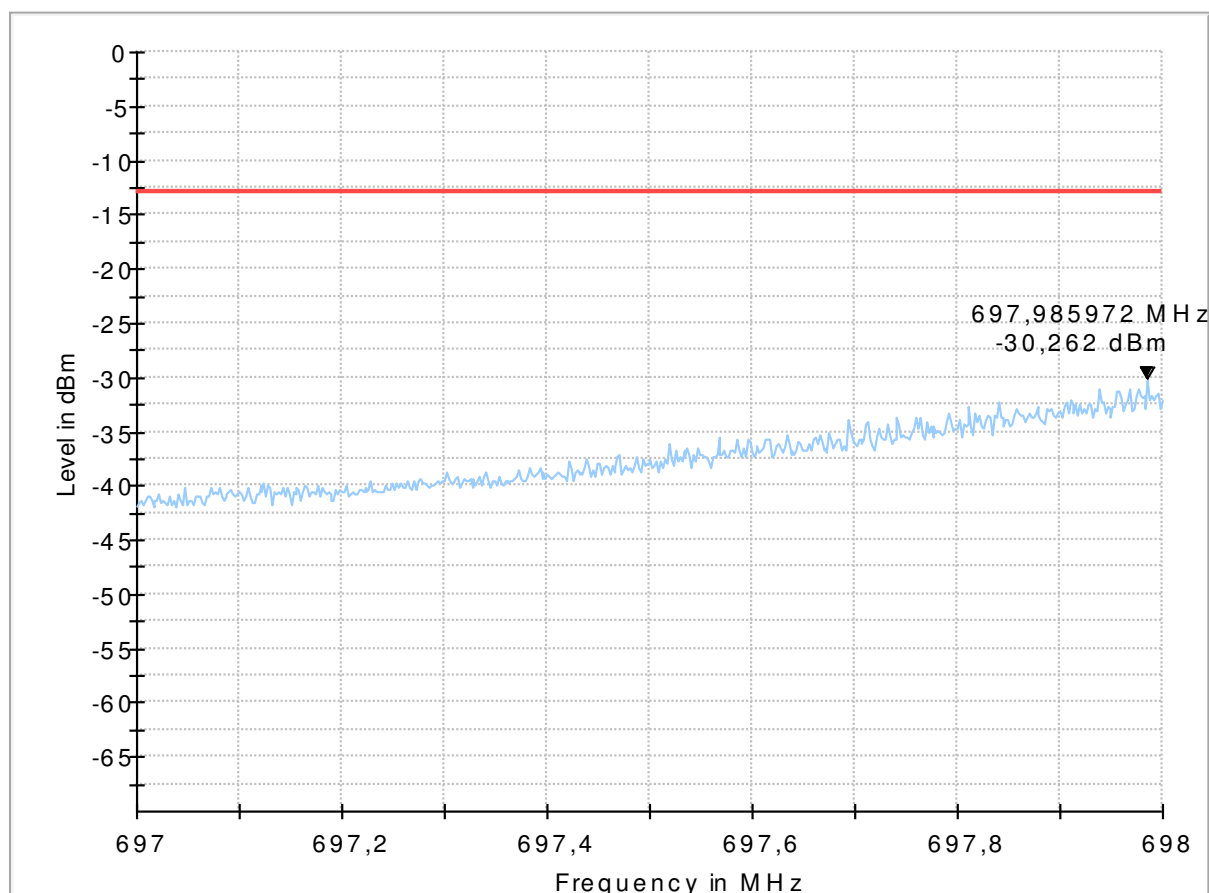
|                           |                                       |
|---------------------------|---------------------------------------|
| Test Description:         | Radiated Band Edge Compliance LTE B12 |
| Test Site Location:       | CETECOM GmbH Essen                    |
| Test Site:                | Fully Anechoic Room (FAR)             |
| Test Standard:            | FCC Part 27                           |
| Operating Mode:           | LTE Band 12 TX ch23035                |
| Exclusionband:            | --                                    |
| Environmental Conditions: | Humidity: 35%rH; Temperature: 22°C    |
| Operator:                 | RI                                    |

#### EUT Information

|               |                  |
|---------------|------------------|
| Manufacturer: | Gemalto M2M GmbH |
| EUT:          | WMC0300EL0 (a)   |
| HW version:   | Rev01            |
| SW version:   | 4.3.3.0b         |
| SVN:          | -                |

Config: -  
IMEI: 35541906031722  
Connected Interfaces: -  
Power Supply: 12VDC over AE1  
Comments: -

### Full Spectrum



### 1.14.2. Low Band-Edge 5MHz signal bandwidth

#### 1.14.2.1. Channel CH23155, QPSK, 1RB high position

## 9.05\_BE\_R\_CH23155\_QPSK\_1RBhigh\_5MHz

### Common Information

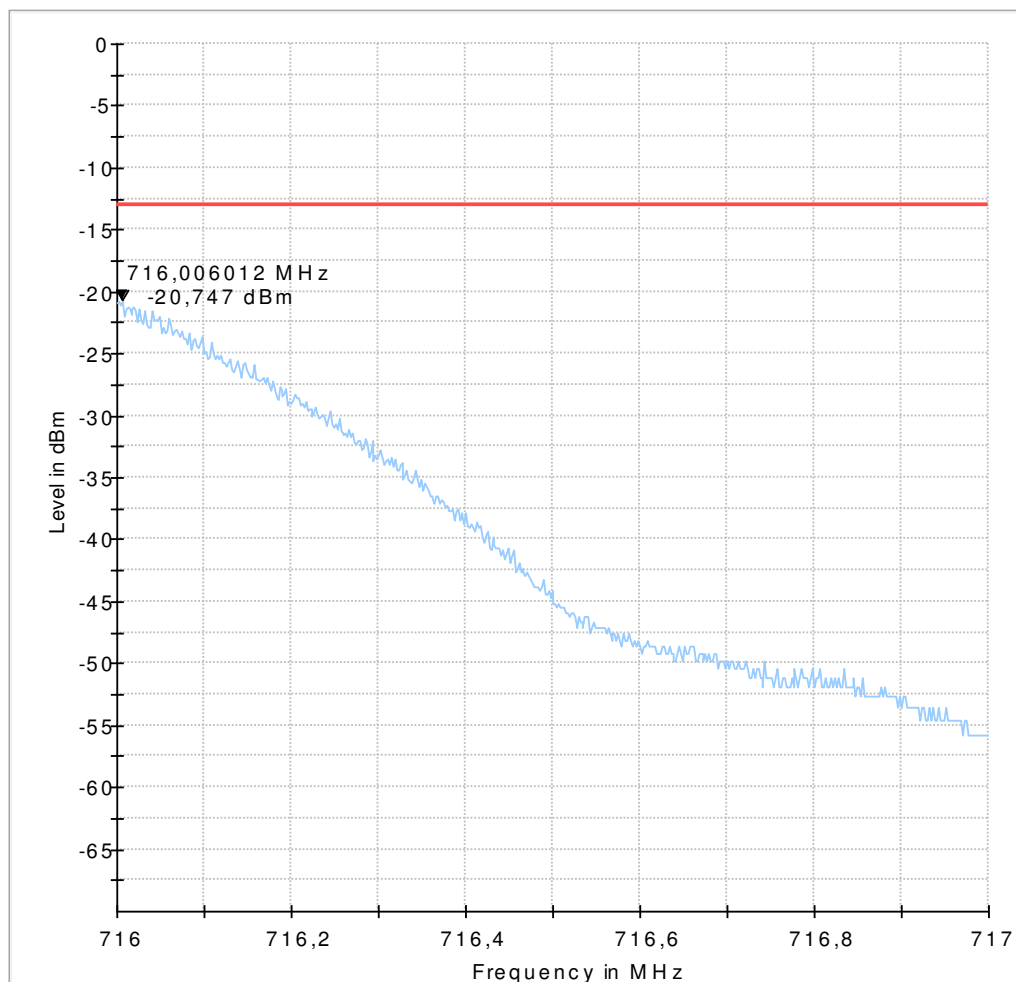
|                           |                                                         |
|---------------------------|---------------------------------------------------------|
| Test Description:         | Band-Edge low - Radiated Spurious Emissions LTE Band 12 |
| Test Site Location:       | CETECOM GmbH Essen                                      |
| Test Site:                | Fully Anechoic Room (FAR)                               |
| Test Standard:            | FCC Part 22.917(a)                                      |
| Operating Mode:           | UE allocated channel 23155/ BW 5MHz: / RB1              |
| Environmental Conditions: | Humidity: 35%rH; Temperature: 22°C                      |
| Operator:                 | RI                                                      |

### EUT Information

|               |                  |
|---------------|------------------|
| Manufacturer: | Gemalto M2M GmbH |
| EUT:          | WMC0300EL0 (a)   |

|                       |                |
|-----------------------|----------------|
| HW version:           | Rev01          |
| SW version:           | 4.3.3.0b       |
| SVN:                  | -              |
| Config:               | -              |
| IMEI:                 | 35541906031722 |
| Connected Interfaces: | -              |
| Power Supply:         | 12VDC over AE1 |
| Comments:             | -              |

#### Full Spectrum



#### 1.14.2.2. Channel CH23155, 16QAM, 1RB high position

### 9.06\_BE\_R\_CH23155\_QAM\_1RBhigh\_5MHz

#### Common Information

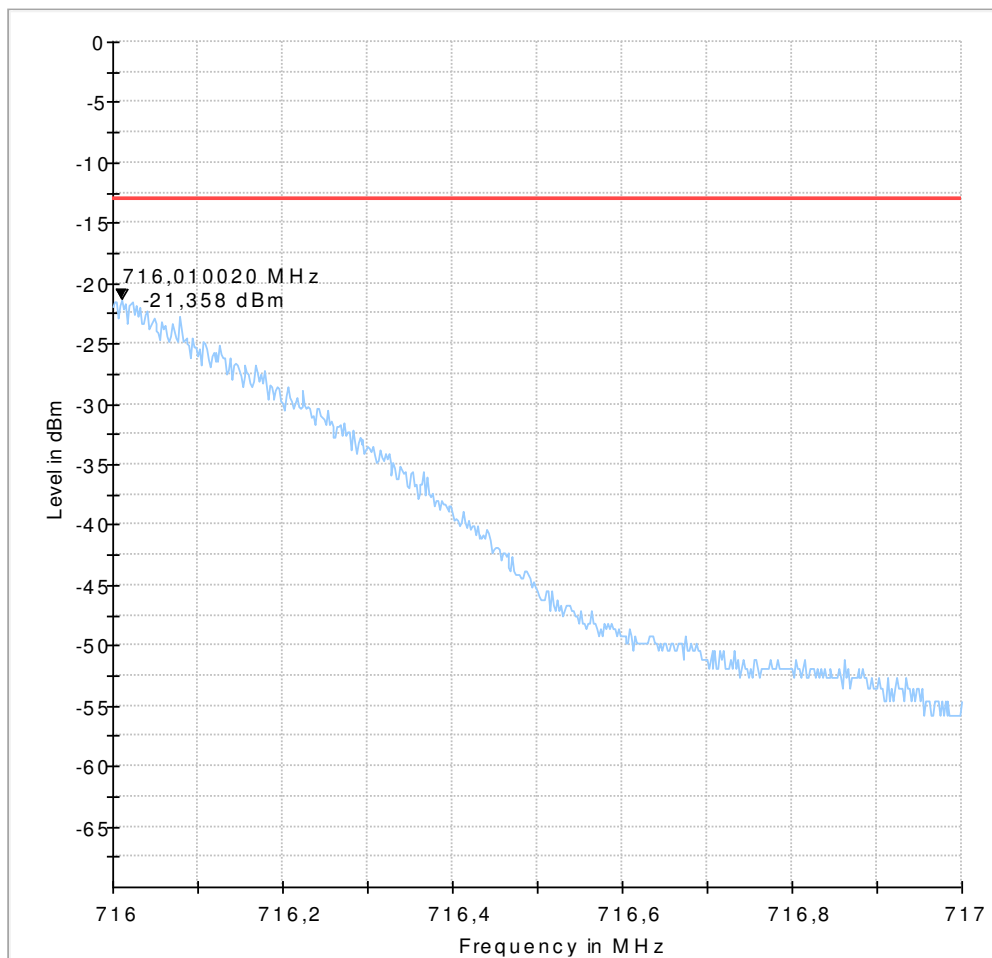
|                           |                                                         |
|---------------------------|---------------------------------------------------------|
| Test Description:         | Band-Edge low - Radiated Spurious Emissions LTE Band 12 |
| Test Site Location:       | CETECOM GmbH Essen                                      |
| Test Site:                | Fully Anechoic Room (FAR)                               |
| Test Standard:            | FCC Part 22.917(a)                                      |
| Operating Mode:           | UE allocated channel 23155/ BW 5MHz: / RB1              |
| Environmental Conditions: | Humidity: 35%rH; Temperature: 22°C                      |
| Operator:                 | RLs                                                     |

#### EUT Information

|               |                  |
|---------------|------------------|
| Manufacturer: | Gemalto M2M GmbH |
|---------------|------------------|

|                       |                |
|-----------------------|----------------|
| EUT:                  | WMC0300EL0 (a) |
| HW version:           | Rev01          |
| SW version:           | 4.3.3.0b       |
| SVN:                  | -              |
| Config:               | -              |
| IMEI:                 | 35541906031722 |
| Connected Interfaces: | -              |
| Power Supply:         | 12VDC over AE1 |
| Comments:             | -              |

## Full Spectrum



### 1.14.2.3. Channel CH23155, QPSK, 25 RBs high position

## 9.07\_BE\_R\_CH23155\_QPSK\_25RBhigh\_5MHz

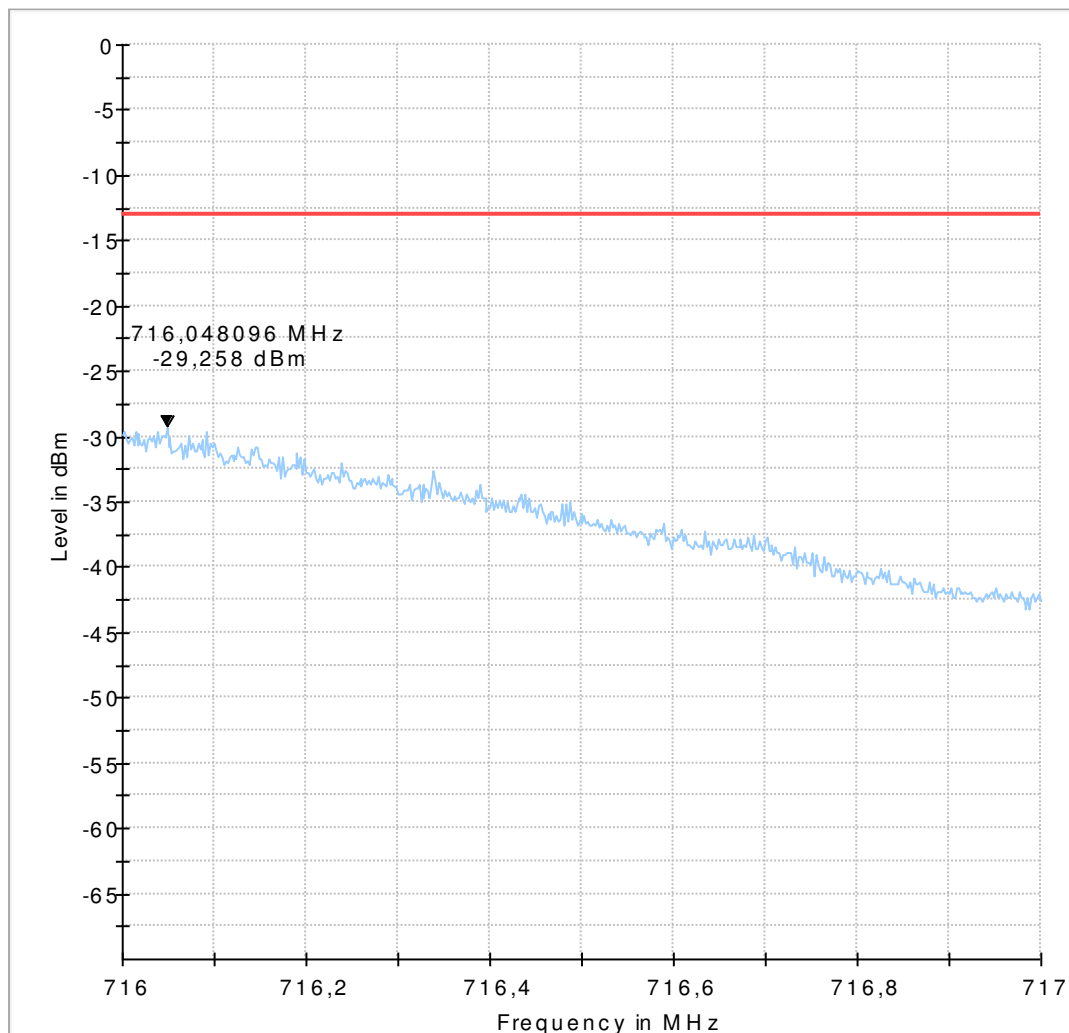
### Common Information

|                           |                                                         |
|---------------------------|---------------------------------------------------------|
| Test Description:         | Band-Edge low - Radiated Spurious Emissions LTE Band 12 |
| Test Site Location:       | CETECOM GmbH Essen                                      |
| Test Site:                | Fully Anechoic Room (FAR)                               |
| Test Standard:            | FCC Part 22.917(a)                                      |
| Operating Mode:           | UE allocated channel 23155/ BW 5MHz: / RB25             |
| Environmental Conditions: | Humidity: 35%rH; Temperature: 22°C                      |
| Operator:                 | RI                                                      |

### EUT Information

|                       |                  |
|-----------------------|------------------|
| Manufacturer:         | Gemalto M2M GmbH |
| -----                 |                  |
| EUT:                  | WMC0300EL0 (a)   |
| HW version:           | Rev01            |
| SW version:           | 4.3.3.0b         |
| SVN:                  | -                |
| Config:               | -                |
| IMEI:                 | 35541906031722   |
| Connected Interfaces: | -                |
| Power Supply:         | 12VDC over AE1   |
| Comments:             | -                |

### Full Spectrum



#### 1.14.2.4. Channel CH23155, 16QAM, 25 RBs high position

### 9.08\_BE\_R\_CH23155\_QAM\_25RBhigh\_5MHz

#### Common Information

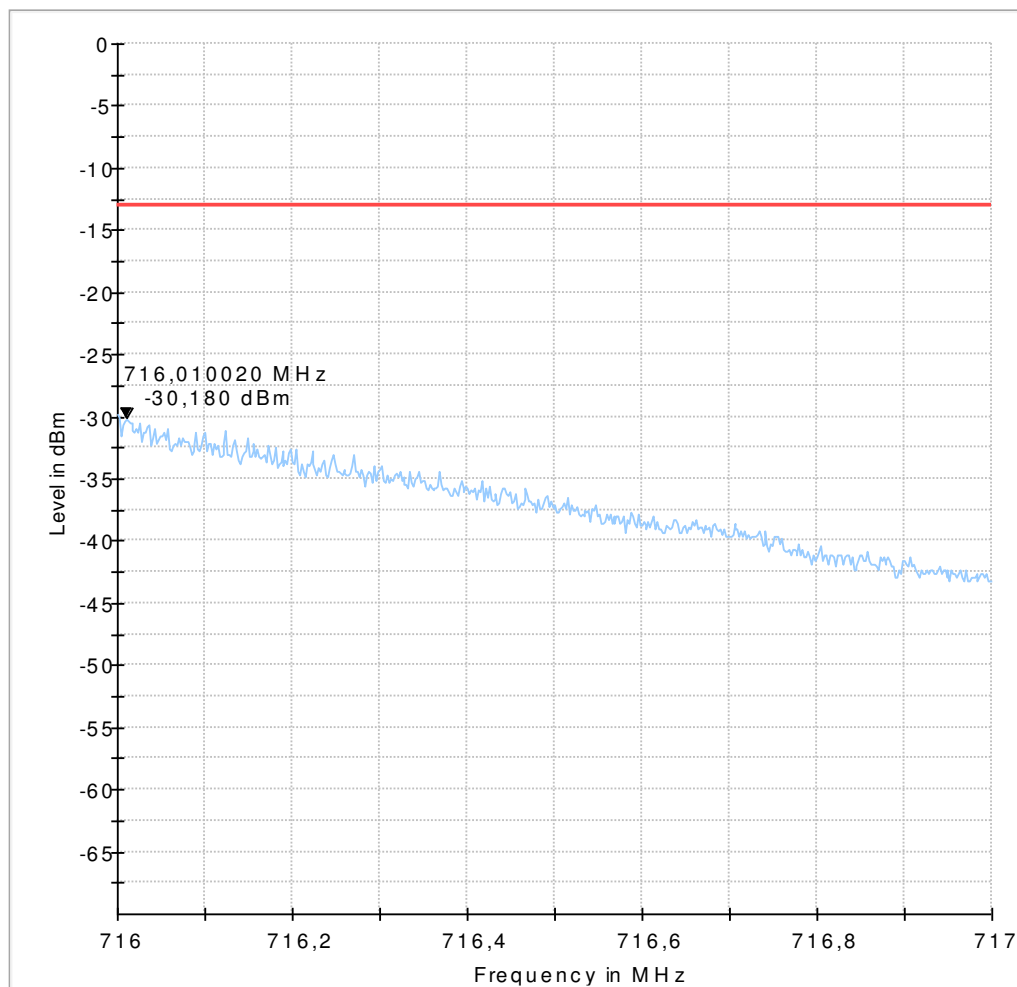
|                           |                                                         |
|---------------------------|---------------------------------------------------------|
| Test Description:         | Band-Edge low - Radiated Spurious Emissions LTE Band 12 |
| Test Site Location:       | CETECOM GmbH Essen                                      |
| Test Site:                | Fully Anechoic Room (FAR)                               |
| Test Standard:            | FCC Part 22.917(a)                                      |
| Operating Mode:           | UE allocated channel 23155/ BW 5MHz: / RB25             |
| Environmental Conditions: | Humidity: 35%rH; Temperature: 22°C                      |
| Operator:                 | RI                                                      |

#### EUT Information

|                       |                  |
|-----------------------|------------------|
| Manufacturer:         | Gemalto M2M GmbH |
| EUT:                  | WMC0300EL0 (a)   |
| HW version:           | Rev01            |
| SW version:           | 4.3.3.0b         |
| SVN:                  | -                |
| Config:               | -                |
| IMEI:                 | 35541906031722   |
| Connected Interfaces: | -                |

Power Supply: 12VDC over AE1  
Comments: -

## Full Spectrum

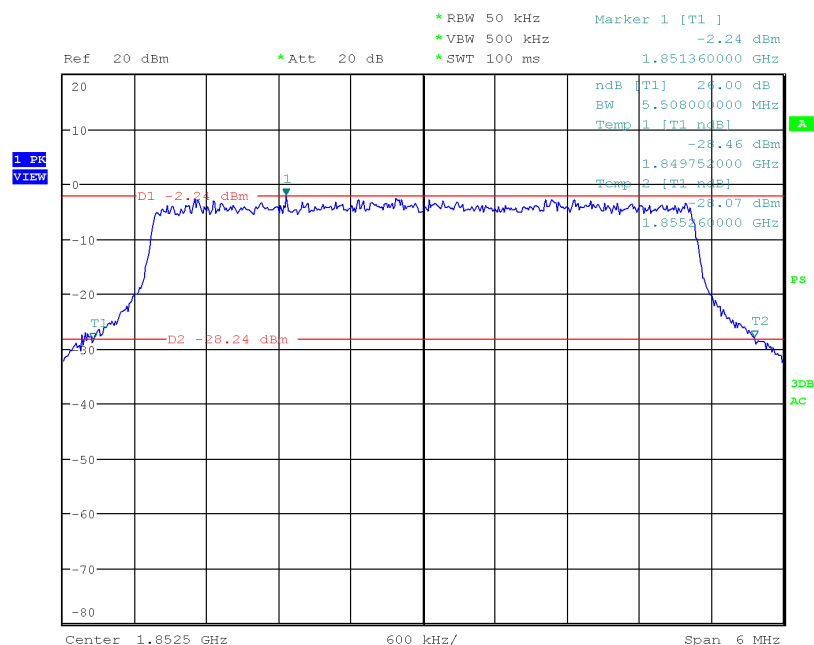


## 1.15. 26dBc Emission bandwidth

### 1.15.1. LTE Band 2

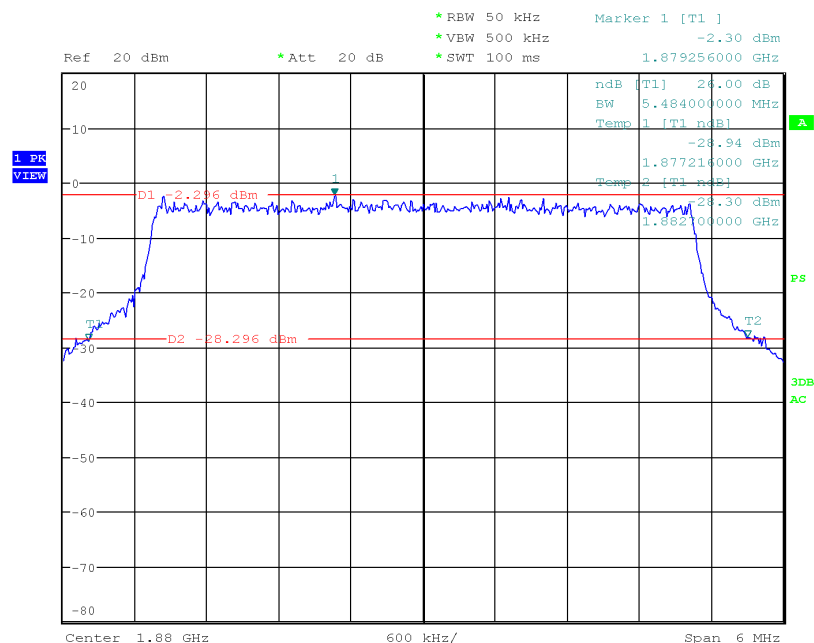
#### 1.15.1.1. BW = 5MHz

#### QPSK-Modulation



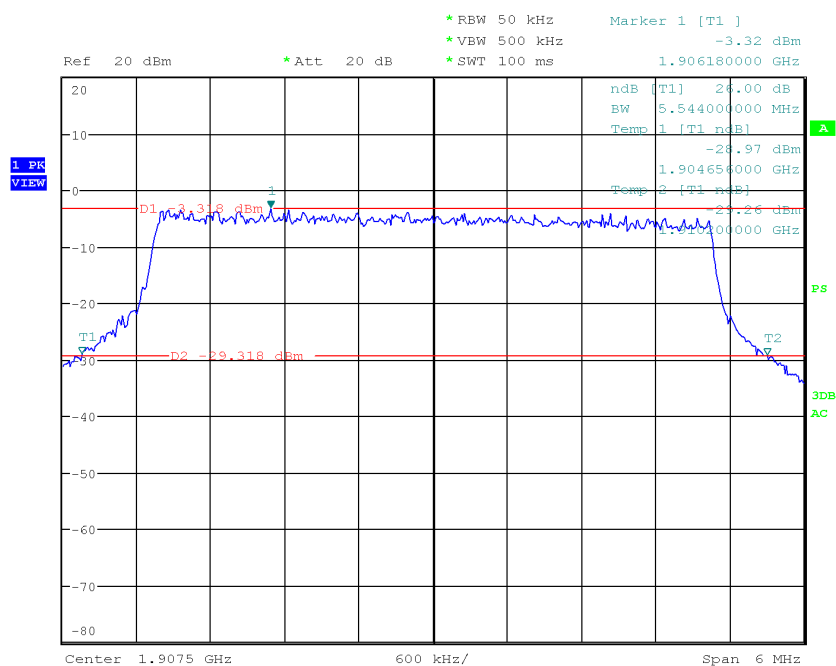
Date: 22.SEP.2016 12:14:58

Diagram 34.206\_26dB BW 5MHz Ch\_18625



Date: 22.SEP.2016 12:18:13

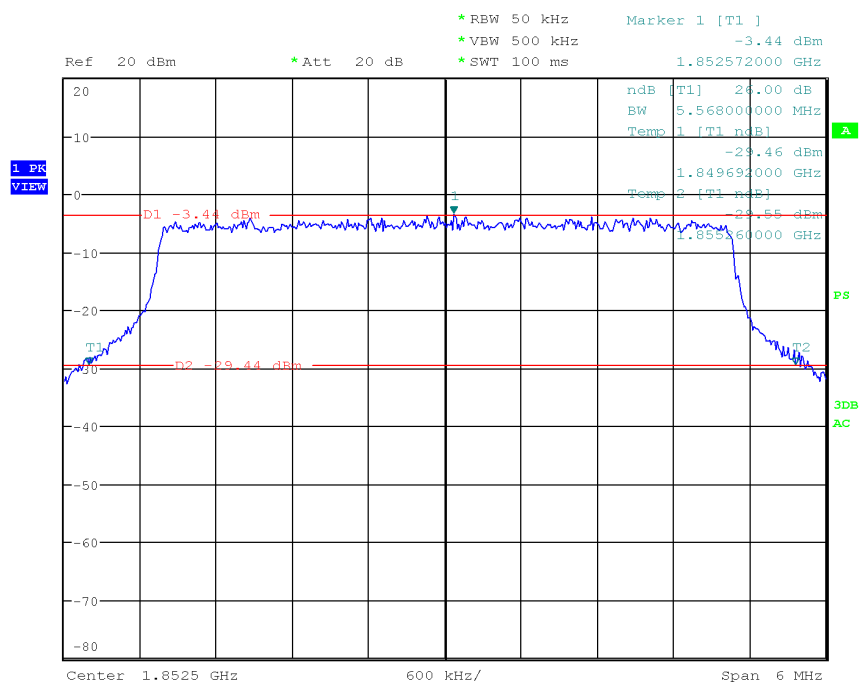
Diagram 34.207\_26dB BW 5MHz Ch\_18900



Date: 22.SEP.2016 12:20:30

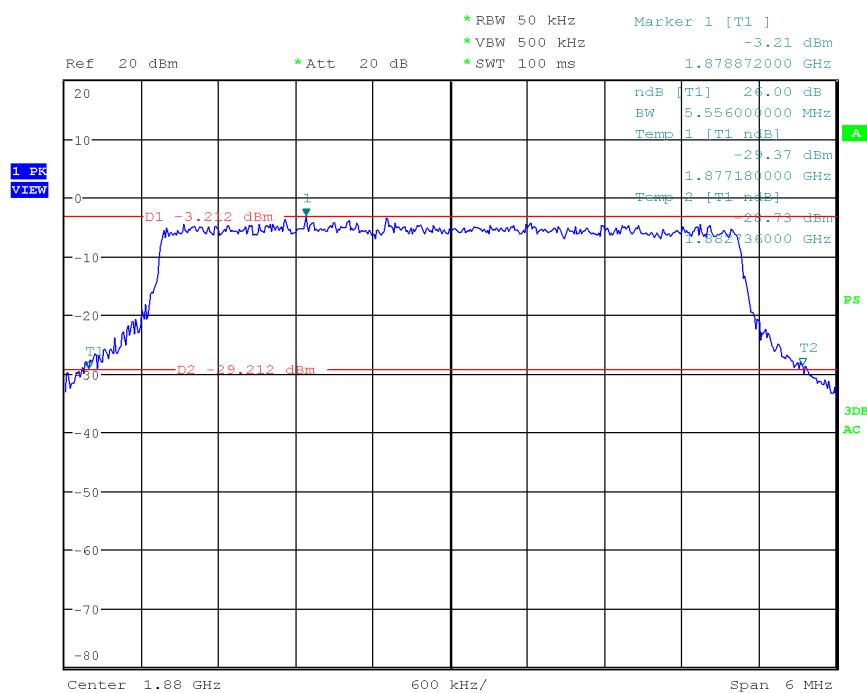
## Diagram 34.208\_26dB BW 5MHz Ch\_19175

### 16-QAM-Modulation



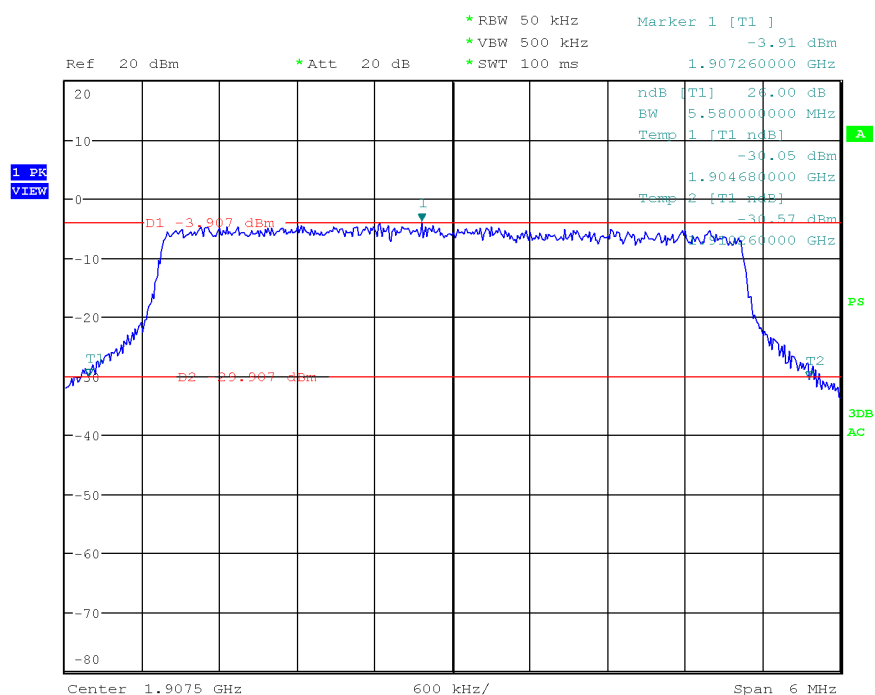
Date: 22.SEP.2016 12:27:40

**Diagram 34.224\_26dB BW 5MHz Ch\_18625**



Date: 22.SEP.2016 12:24:37

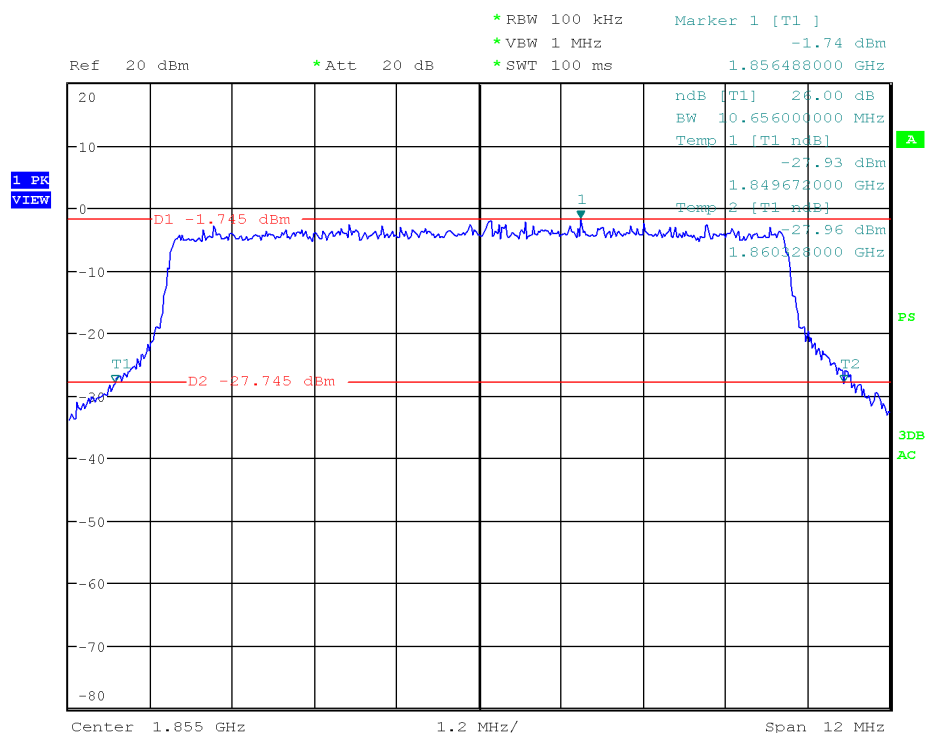
**Diagram 34.225\_26dB BW 5MHz Ch\_18900**



Date: 22.SEP.2016 12:21:51

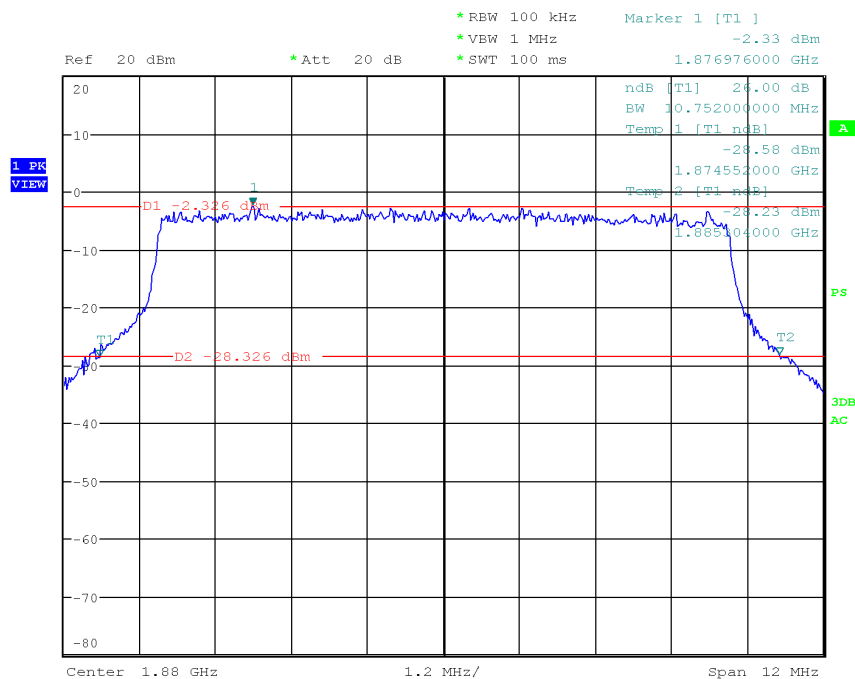
## Diagram 34.226\_26dB BW 5MHz Ch\_19175

### 1.15.1.2. BW = 10MHz QPSK-Modulation



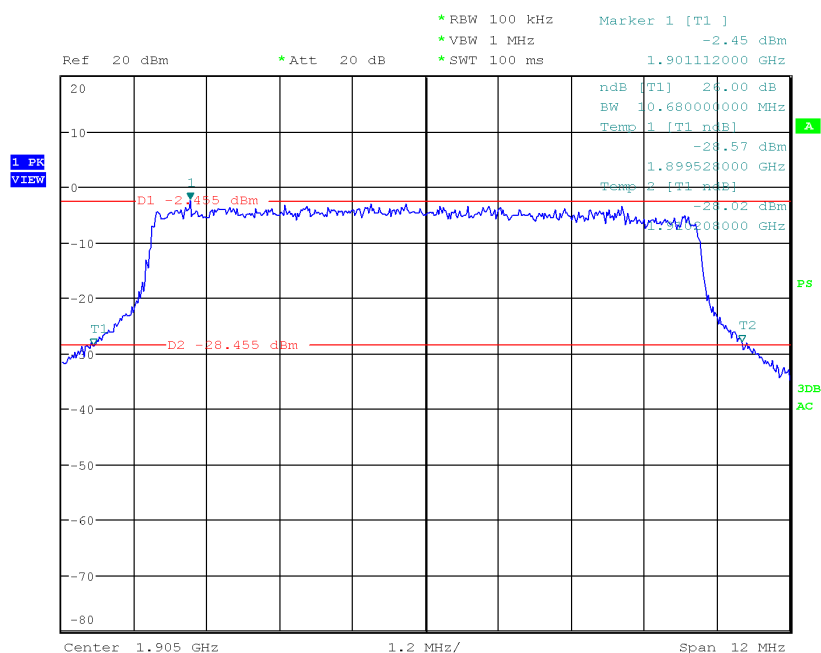
Date: 22.SEP.2016 12:33:00

Diagram 34.209\_26dB BW 10MHz Ch\_18650



Date: 22.SEP.2016 12:42:48

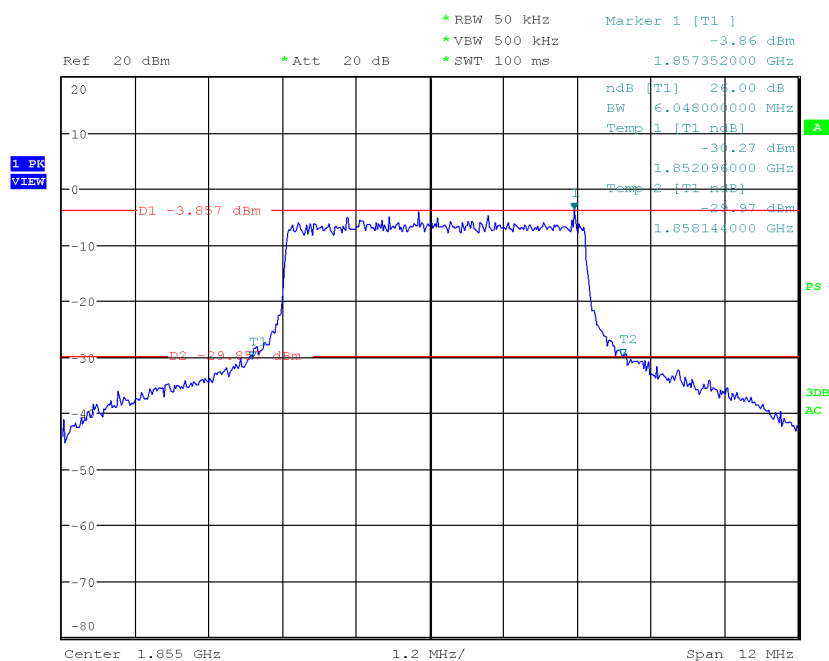
Diagram 34.2010\_26dB BW 10MHz Ch\_18900



Date: 22.SEP.2016 12:48:34

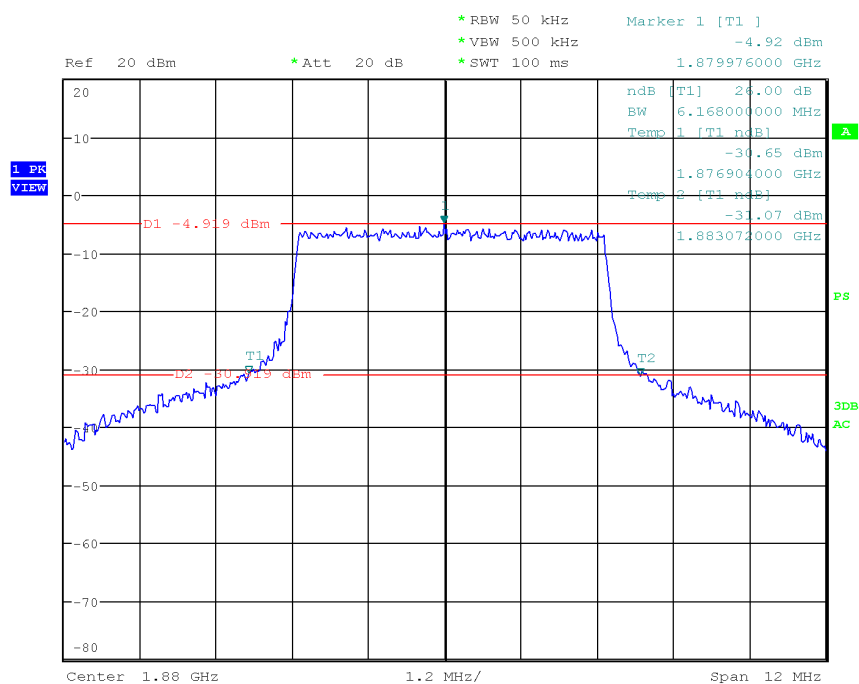
## Diagram 34.211\_26dB BW 10MHz Ch\_19150

### 16-QAM-Modulation



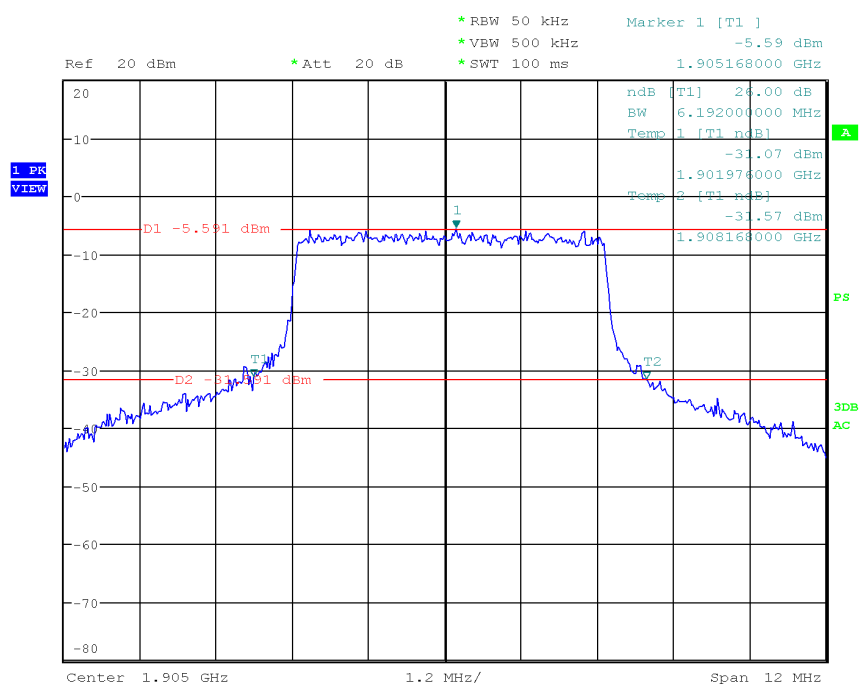
Date: 12.OCT.2016 11:34:16

## Diagram 34.227\_26dB BW 10MHz Ch\_18650



Date: 12.OCT.2016 11:56:45

**Diagram 34.228\_26dB BW 10MHz Ch\_18900**

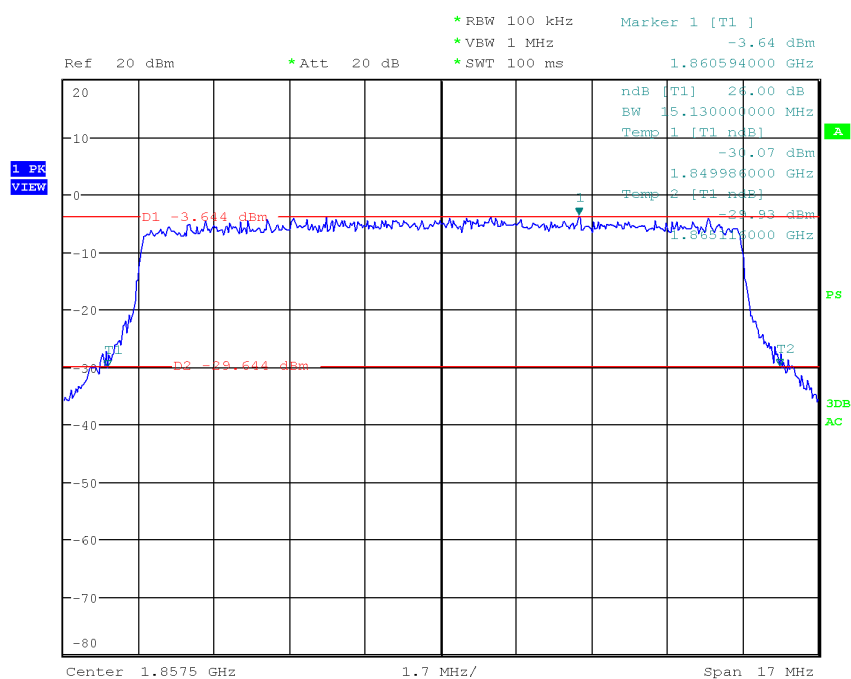


Date: 12.OCT.2016 12:00:10

Diagram 34.229\_26dB BW 10MHz Ch\_19150

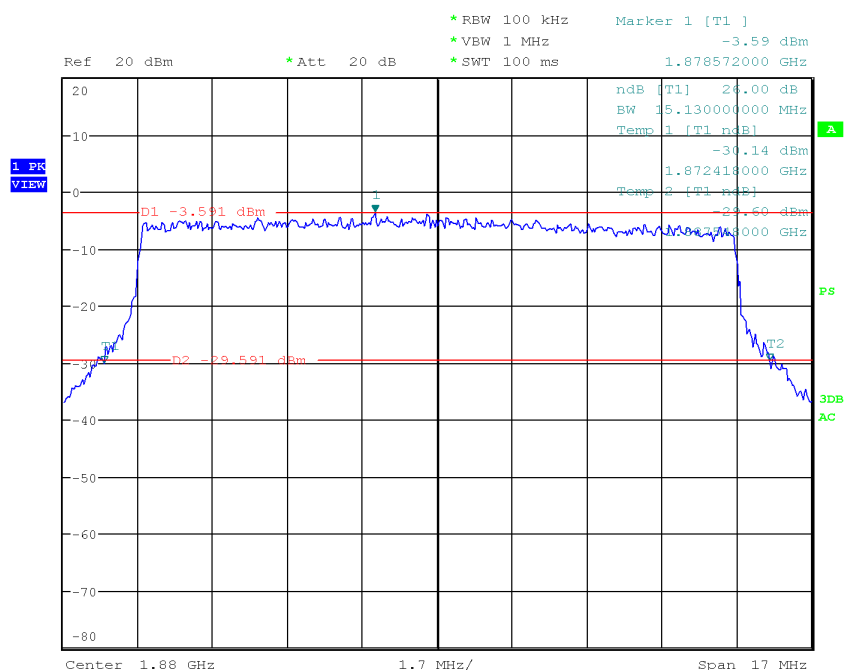
### 1.15.1.3. BW = 15MHz

#### QPSK-Modulation



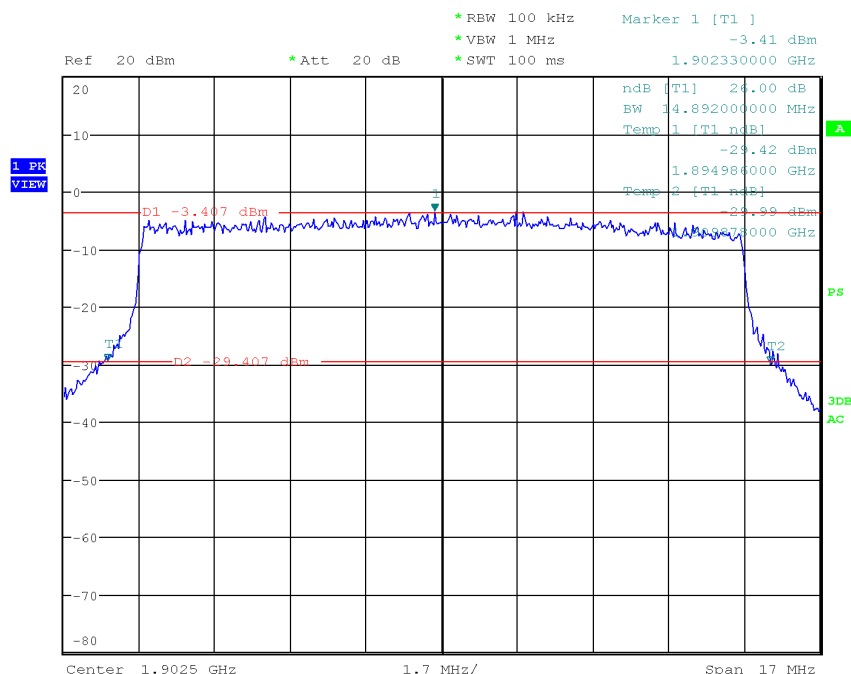
Date: 22.SEP.2016 12:52:26

Diagram 34.212\_26dB BW 15MHz Ch\_18675



Date: 22.SEP.2016 12:54:46

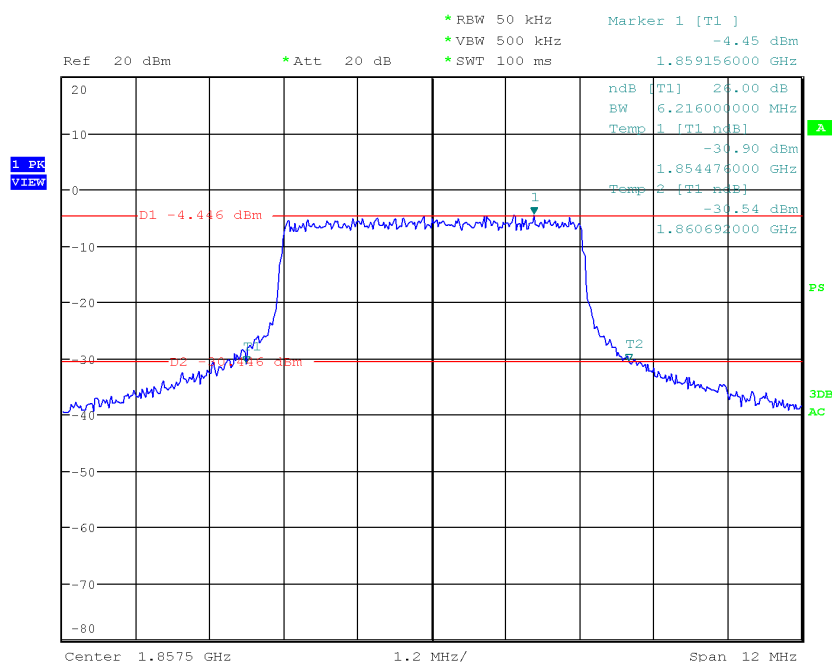
Diagram 34.213\_26dB BW 15MHz Ch\_18900



Date: 22.SEP.2016 12:56:33

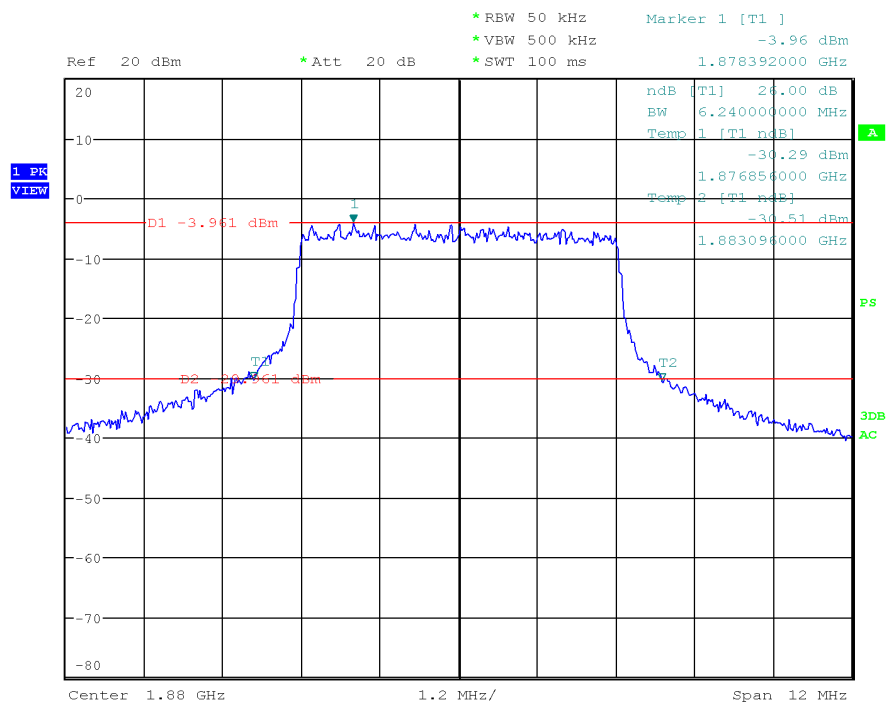
Diagram 34.214\_26dB BW 15MHz Ch\_19125

16-QAM-Modulation



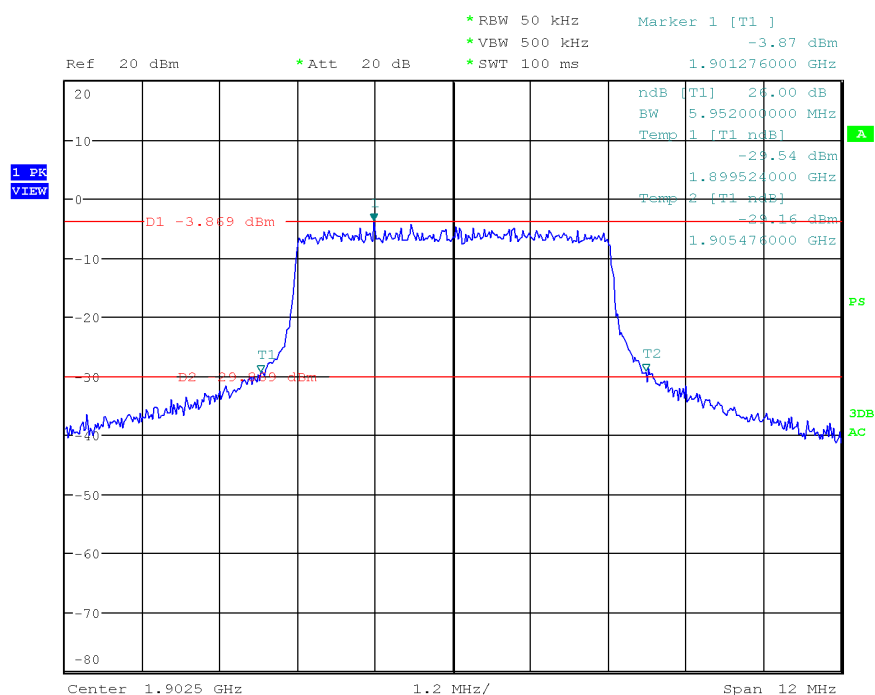
Date: 12.OCT.2016 12:05:11

Diagram 34.230\_26dB BW 15MHz Ch\_18675



Date: 12.OCT.2016 12:07:37

**Diagram 34.231\_26dB BW 15MHz Ch\_18900**

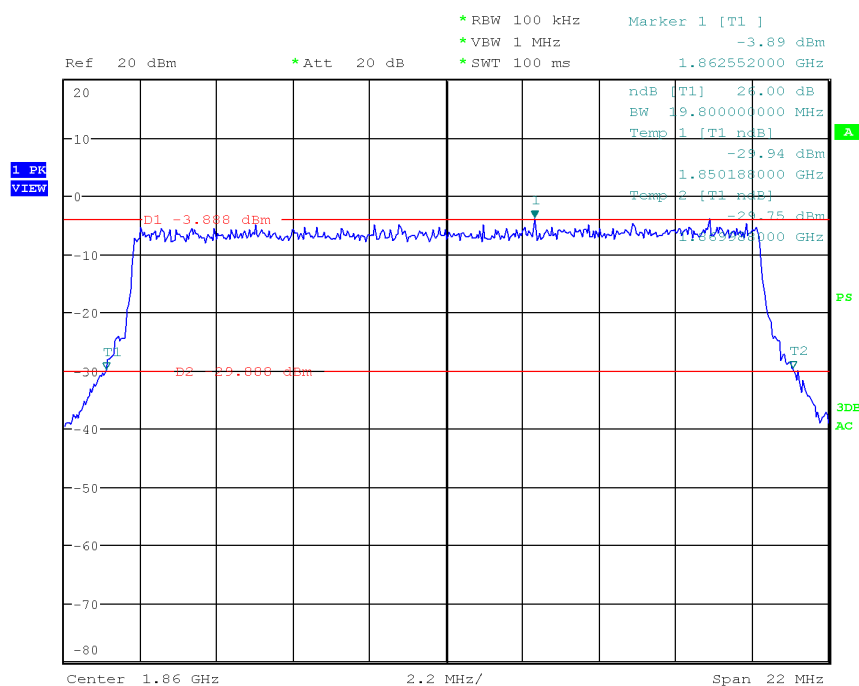


Date: 12.OCT.2016 12:18:43

**Diagram 34.232\_26dB BW 15MHz Ch\_19125**

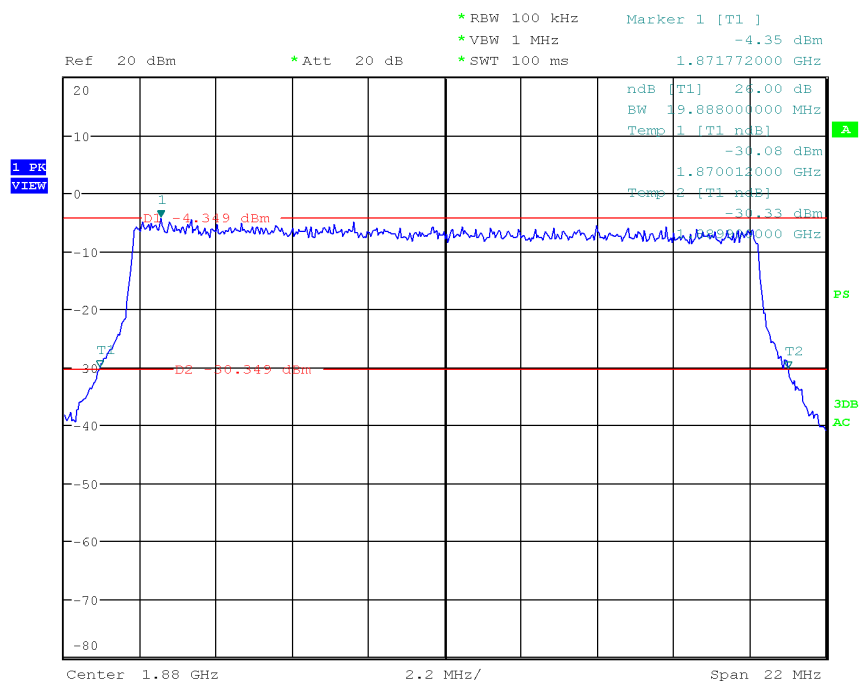
#### 1.15.1.4. BW = 20MHz

QPSK-Modulation



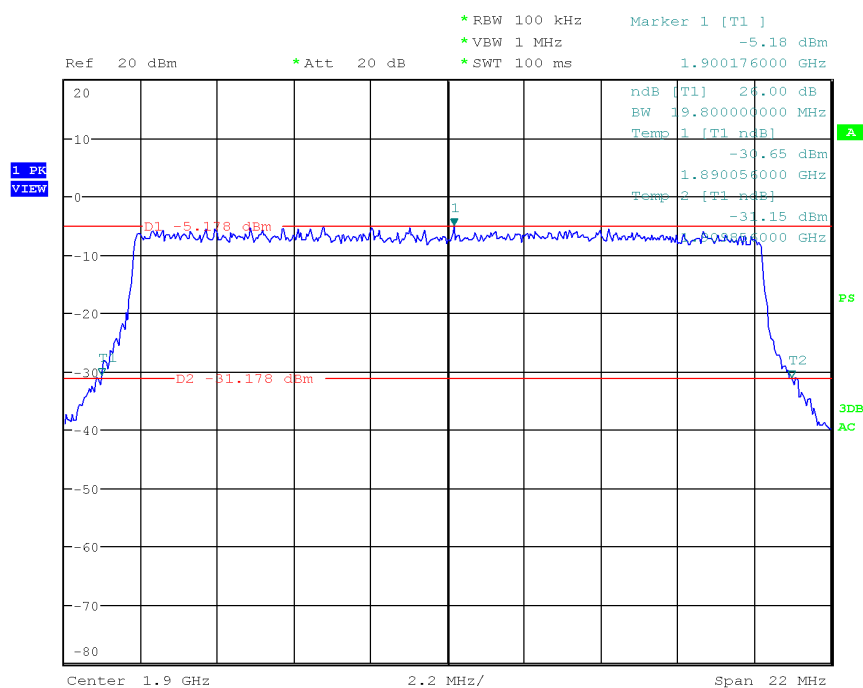
Date: 22.SEP.2016 13:01:59

Diagram 34.215\_26dB BW 20MHz Ch\_18700



Date: 22.SEP.2016 13:03:56

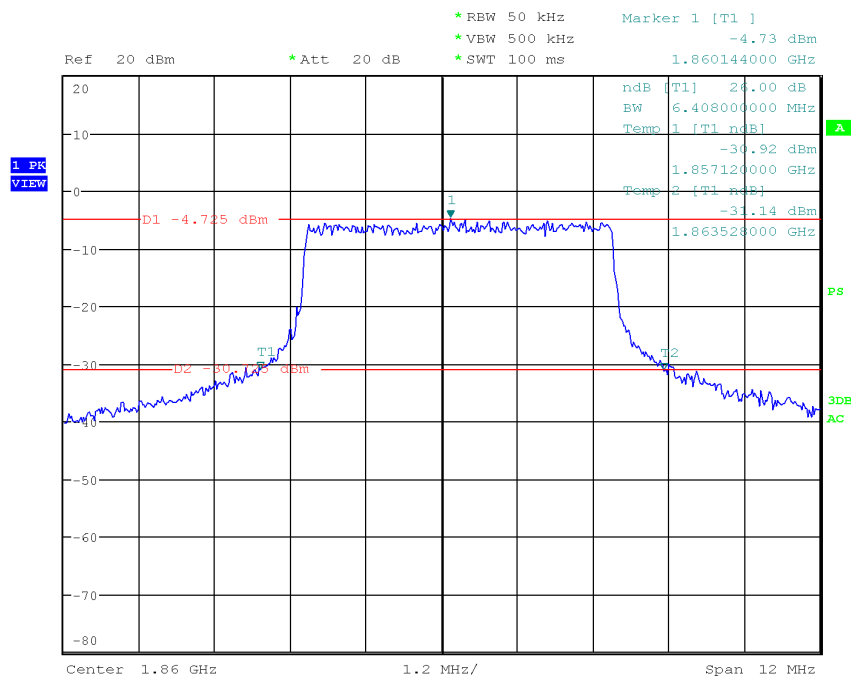
Diagram 34.216\_26dB BW 20MHz Ch\_18900



Date: 22.SEP.2016 13:15:18

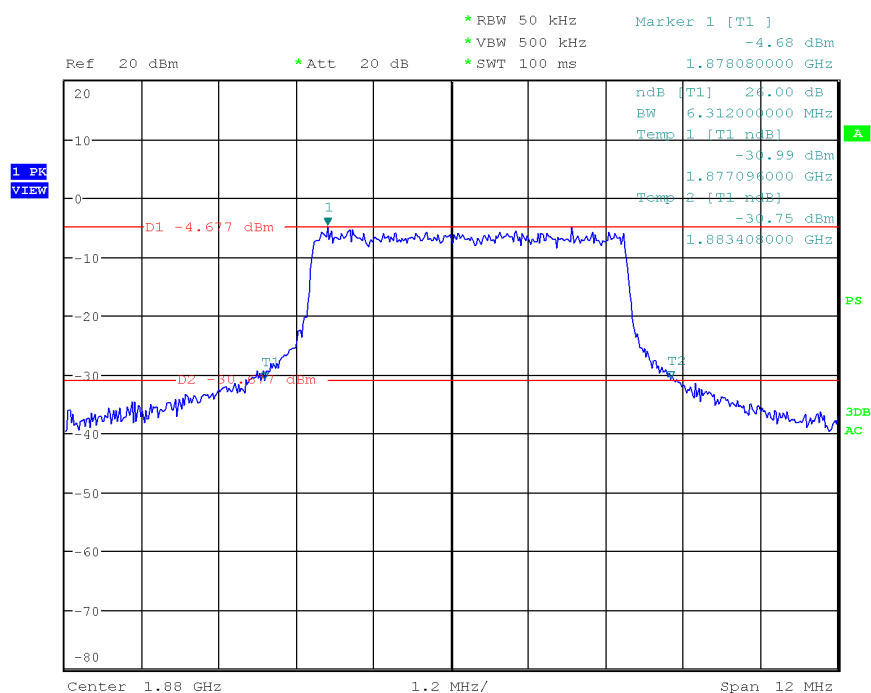
Diagram 34.217\_26dB BW 20MHz Ch\_19100

## 16-QAM-Modulation



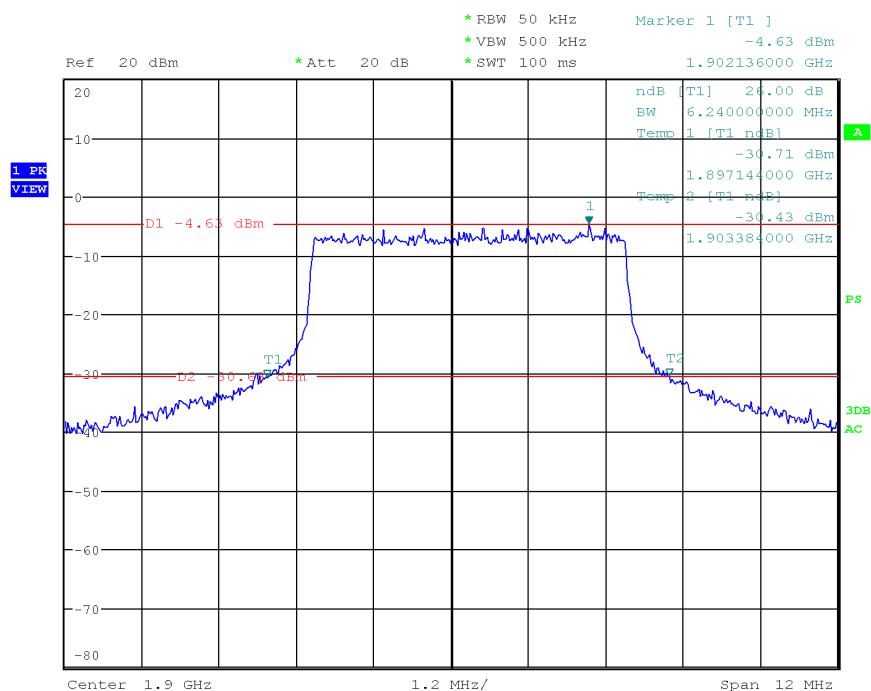
Date: 12.OCT.2016 12:22:21

Diagram 34.233\_26dB BW 20MHz Ch\_18700



Date: 12.OCT.2016 12:24:27

Diagram 34.234\_26dB BW 20MHz Ch\_18900



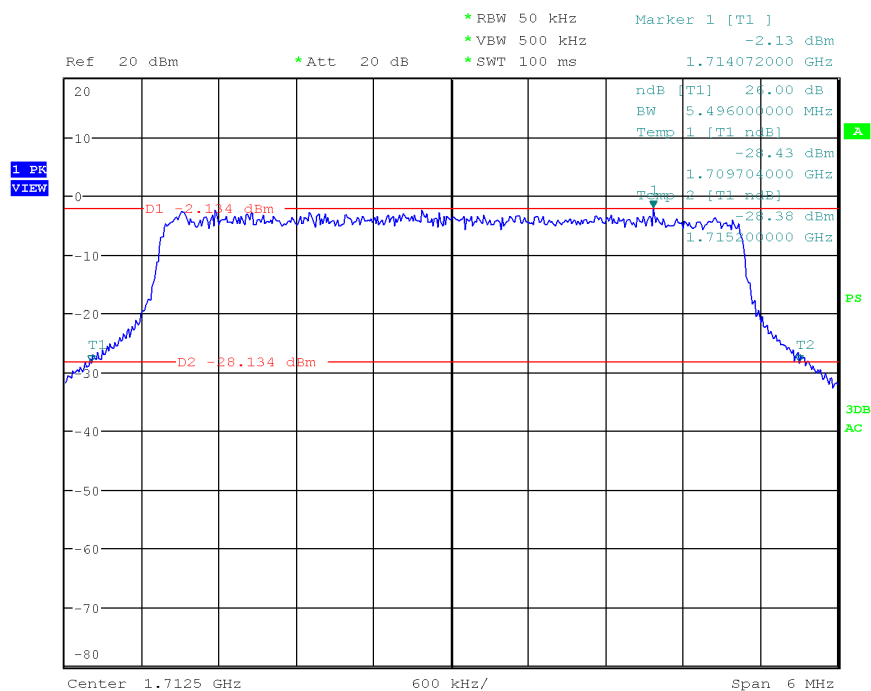
Date: 12.OCT.2016 12:26:11

Diagram 34.235\_26dB BW 20MHz Ch\_19100



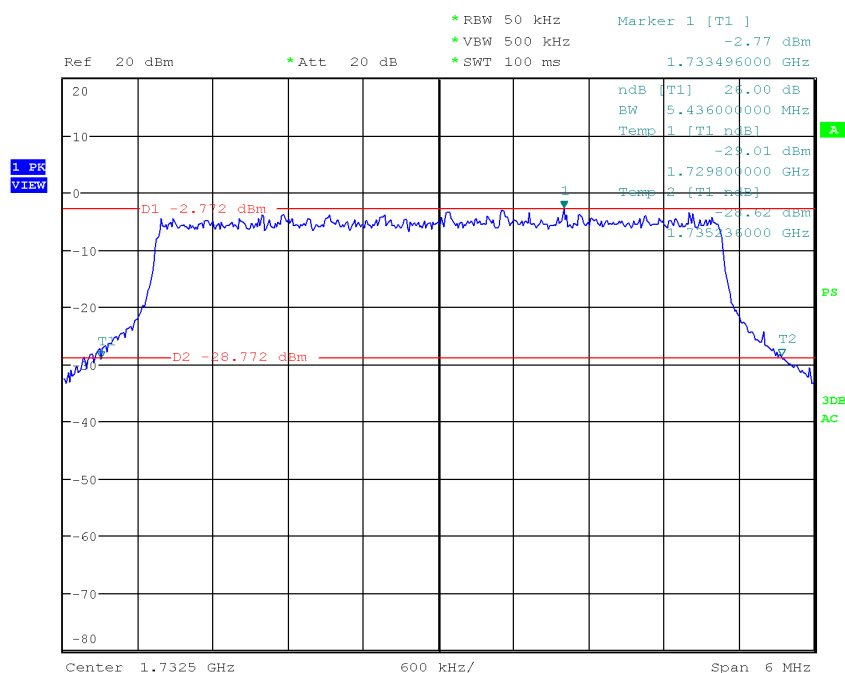
### 1.15.2.1. BW = 5MHz

## QPSK-Modulation



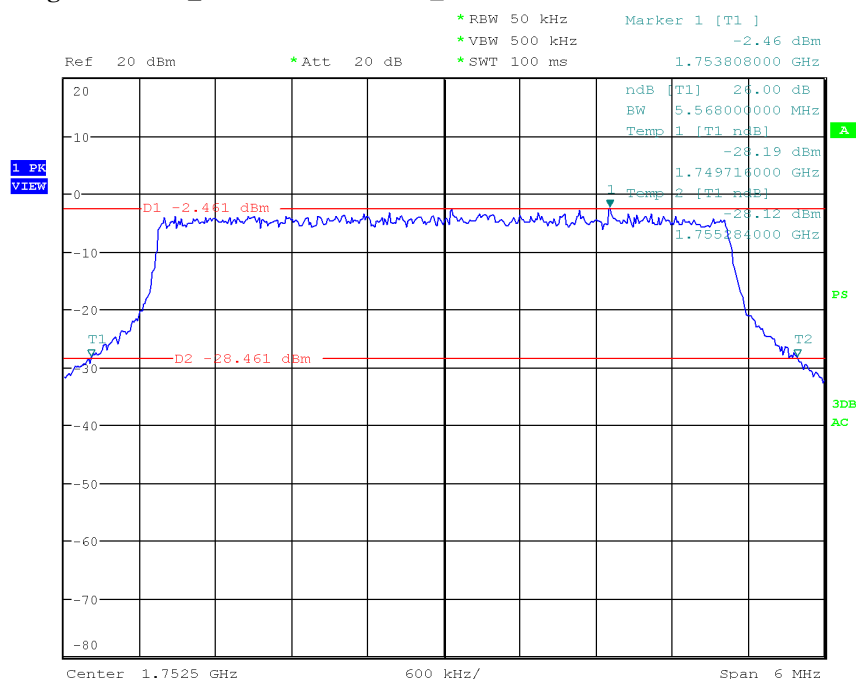
Date: 22.SEP.2016 13:23:49

**Diagram 34.407\_26dB BW 5MHz Ch\_19975**



Date: 22.SEP.2016 13:26:44

**Diagram 34.408\_26dB BW 5MHz Ch\_20175**



Date: 22.SEP.2016 13:28:53

**Diagram 34.409\_26dB BW 5MHz Ch\_20375**

16-QAM-Modulation