

# TEST REPORT

FCC ID: 2AIZN-X1101B

Product: Tablet

Model No.: X1101B

Trade Mark: Infinix

Report No.: WSCT-ANAB-R&amp;E241100056A-RF

Issued Date: 14 November 2024

Issued for:

INFINIX MOBILITY LIMITED  
FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25 SHAN MEI  
STREET FOTAN NT HONGKONG

Issued By:

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## 1. GENERAL INFORMATION

Product: Tablet  
Model No.: X1101B  
Additional Model: Infinix  
Applicant: **INFINIX MOBILITY LIMITED**  
FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25 SHAN MEI  
STREET FOTAN NT HONGKONG  
Manufacturer: **INFINIX MOBILITY LIMITED**  
FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25 SHAN MEI  
STREET FOTAN NT HONGKONG  
Date of receipt: 29 September 2024  
Date of Test: 30 September 2024 to 13 November 2024  
Applicable Standards: FCC CFR Title 47 Part 2, 22, 24, 27, 90  
ANSI C63.26-2015

The above equipment has been tested by World Standardization Certification & Testing Group (Shenzhen) Co., Ltd. And found compliance with the requirements set forth in the technical standards mentioned above. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Tested By: Wang Xiang

(Wang Xiang)

Checked By: Qin Shuiquan

(Qin Shuiquan)

Approved By: Li Huaibi

(Li Huaibi)

Date: 14 November 2024

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## 2. GENERAL DESCRIPTION OF EUT

|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Equipment Type:                 | Tablet                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Model                           | X1101B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Trade Mark                      | Infinix                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Software version:               | X1101B-M1101CDEGHIJKL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Hardware version:               | V1.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Operating Bands                 | GSM 850/1900 MHz<br>WCDMA Band 2/4/5<br>FDD LTE Band 2/4/5/7/12/13/17/25/26/66<br>TDD LTE Band 38/41                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Antenna Type:                   | Internal Antenna                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Antenna gain:                   | GSM 850/WCDMA B5/LTE B5/26: 0.5dbi<br>PCS 1900/WCDMA B2/LTE B2: -1dbi<br>WCDMA B4/LTE B4/B66: -1dbi<br>LTE B7/B38/B41: 1dbi<br>LTE B12/B13/B17: -4dbi<br>LTE B25:-3dbi                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Radiated Power (EIRP/ERP) Limit | GSM 850/WCDMA B5/LTE B5/B26: 7.00W(38.45dBm)<br>PCS 1900/WCDMA B2/LTE B2/25: 2.00W(33.01dBm)<br>WCDMA B4/LTE B4/B66: 1.00W(30.00dBm)<br>LTE B7/B38/B41: 2.00W(33.01dBm)<br>LTE B12/B13/B17: 3.00W(34.77dBm)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Operation Frequency Range:      | GSM850: 824-849MHz (TX), 869-894MHz (RX)<br>PCS1900: 1850-1910MHz (TX), 1930-1990MHz (RX)<br>WCDMA Band2: 1850-1910MHz (TX), 1930-1990MHz (RX);<br>WCDMA Band4: 1710-1755MHz (TX), 2110-2155MHz (RX);<br>WCDMA Band5: 824-849MHz (TX), 869-894MHz (RX);<br>LTE Band2: 1850-1910MHz (TX), 1930-1990MHz (RX);<br>LTE Band4: 1710-1755MHz (TX), 2110-2155MHz (RX);<br>LTE Band5: 824-849MHz (TX), 869-894MHz (RX);<br>LTE Band7: 2500-2570MHz (TX), 2620-2690MHz (RX);<br>LTE Band12: 699-716MHz (TX), 729-746MHz (RX);<br>LTE Band13: 777-787 MHz (TX), 746-756 MHz (RX);<br>LTE Band17: 704-716MHz (TX), 734-746MHz (RX);<br>LTE Band25: 1850-1910 MHz (TX), 1930-1995 MHz (RX);<br>LTE Band26: 814~824MHz(TX), 859~869MHz(RX);<br>LTE Band26: 824~849MHz(TX), 869~894MHz(RX);<br>LTE Band38: 2570-2620MHz(TX), 2570-2620MHz(RX);<br>LTE Band41: 2496-2690 MHz(TX), 2496-2690 MHz(RX);<br>LTE Band66: 1710-1780 MHz(TX), 2110-2200 MHz(RX); |
| Modulation Type                 | GSM/GPRS: GMSK<br>EGPRS: 8PSK<br>WCDMA: QPSK<br>HSDPA/HSUPA: QPSK /16QAM<br>LTE: QPSK/16QAM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Operating Voltage:              | Adapter1: U180XKB<br>Input: 100-240V~50/60Hz 0.6A<br>Output: 5.0V---2.4A , 7.5V---2.4A 18W max                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

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|            |                                                                                                                                                                                                                                                                              |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|            | Adapter2: U180XED<br>Input: 100-240V~50/60Hz 0.6A<br>Output: 5.0V~2.4A , 7.5V~2.4A 18W max<br>Rechargeable Li-ion Polymer Battery: BL-68CX<br>Rated Voltage: 3.85V<br>Rated Capacity: 6800mAh /26.18Wh<br>Typical Capacity: 7000mAh /26.95Wh<br>Limited Charge Voltage: 4.4V |
| Max power: | See Table 2.1                                                                                                                                                                                                                                                                |
| Remark:    | N/A.                                                                                                                                                                                                                                                                         |

- Note:
1. The EUT is a Tablet, supporting dual SIM card slots under the same transceiver. Both SIM card slots support GSM, WCDMA, LTE, and both SIM card slots share the same transceiver, so only SIM1 is tested in this report.
  2. The antenna gain provided by the applicant, and the laboratory will not be responsible for the accumulated calculation results which covers the information provided by the applicant.
  3. N/A stands for no applicable.
  4. Antenna gain provided by the customer.

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**Table 2.1 Maximum power in the operating frequency band.**

| Operation Band (s)          | Power Class | Modulation Type | Maximum conducted output power (dBm) | ERP/EIRP (dBm) |
|-----------------------------|-------------|-----------------|--------------------------------------|----------------|
| GSM 850                     | Class 4     | GMSK            | 32.50                                | 30.85          |
| EGPRS 850                   | Class 4     | 8PSK            | 27.95                                | 26.30          |
| GSM 1900                    | Class 1     | GMSK            | 30.00                                | 29.00          |
| EGPRS 1900                  | Class 1     | 8PSK            | 25.68                                | 24.68          |
| WCDMA Band 2                | Class 3     | QPSK            | 23.46                                | 22.46          |
| WCDMA Band 4                | Class 3     | QPSK            | 23.45                                | 22.45          |
| WCDMA Band 5                | Class 3     | QPSK            | 22.88                                | 21.23          |
| E-UTRA Band 2               | Class 3     | QPSK            | 23.00                                | 22.00          |
|                             | Class 3     | 16QAM           | 22.40                                | 21.40          |
| E-UTRA Band 4               | Class 3     | QPSK            | 23.06                                | 22.06          |
|                             | Class 3     | 16QAM           | 22.31                                | 21.31          |
| E-UTRA Band 5               | Class 3     | QPSK            | 23.04                                | 21.39          |
|                             | Class 3     | 16QAM           | 22.39                                | 20.74          |
| E-UTRA Band 7               | Class 3     | QPSK            | 22.32                                | 23.32          |
|                             | Class 3     | 16QAM           | 21.57                                | 22.57          |
| E-UTRA Band 12              | Class 3     | QPSK            | 22.97                                | 16.82          |
|                             | Class 3     | 16QAM           | 22.31                                | 16.16          |
| E-UTRA Band 13              | Class 3     | QPSK            | 22.81                                | 16.66          |
|                             | Class 3     | 16QAM           | 22.29                                | 16.14          |
| E-UTRA Band 17              | Class 3     | QPSK            | 22.82                                | 16.67          |
|                             | Class 3     | 16QAM           | 22.27                                | 16.12          |
| E-UTRA Band 25              | Class 3     | QPSK            | 23.21                                | 22.21          |
|                             | Class 3     | 16QAM           | 22.57                                | 21.57          |
| E-UTRA Band 26 (814-824MHz) | Class 3     | QPSK            | 23.15                                | 21.50          |
|                             | Class 3     | 16QAM           | 22.61                                | 20.96          |
| E-UTRA Band 26 (824-849MHz) | Class 3     | QPSK            | 23.27                                | 21.62          |
|                             | Class 3     | 16QAM           | 22.68                                | 21.03          |
| E-UTRA Band 38              | Class 3     | QPSK            | 22.34                                | 23.34          |
|                             | Class 3     | 16QAM           | 21.88                                | 22.88          |

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|                |         |       |       |       |
|----------------|---------|-------|-------|-------|
| E-UTRA Band 41 | Class 3 | QPSK  | 22.28 | 23.28 |
|                | Class 3 | 16QAM | 21.80 | 22.80 |
| E-UTRA Band 66 | Class 3 | QPSK  | 23.22 | 22.22 |
|                | Class 3 | 16QAM | 22.35 | 21.35 |

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### 3. FACILITIES AND ACCREDITATIONS

#### 3.1. Facilities

All measurement facilities used to collect the measurement data are located at **Building A-B, Baoli'an Industrial Park, No. 58 Tangtou Avenue, Shiyan Street, Bao'an District, Shenzhen, Guangdong, China of the World Standardization Certification & Testing Group (Shenzhen) Co., Ltd.**

The sites are constructed in conformance with the requirements of ANSI C63.4 and CISPR Publication 22. All receiving equipment conforms to CISPR Publication 16-1, "Radio Interference Measuring Apparatus and Measurement Methods."

#### 3.2. ACCREDITATIONS

##### CNAS - Registration Number: L3732

China National Accreditation Service for Conformity Assessment, The test firm Registration Number: L3732

##### FCC - Designation Number: CN1303

World Standardization Certification & Testing Group(Shenzhen) CO., LTD. has been accredited as a testing laboratory by FCC(Federal Communications Commission). The test firm Designation Number: CN1303.

##### ANAB - Certificate Number: AT-3951

The EMC Laboratory has been accredited by the American Association for Laboratory Accreditation (ANAB). Certification Number: AT-3951

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### 3.3. EUT System Configuration

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

**Fig. 3.2-1 Configuration of EUT System**

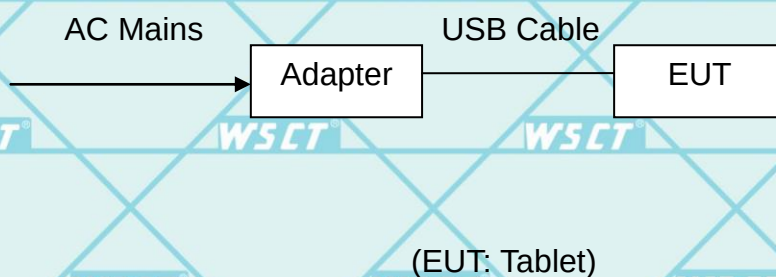


**Table 3.2-1 Equipment Used in EUT System**

| Item | Equipment | Model No.  | ID or Specification | Note        |
|------|-----------|------------|---------------------|-------------|
| 1    | Adapter   | Adapter1/2 |                     | Accessories |

\*\*\*Note: All the accessories have been used during the test. The following “EUT” in setup diagram means EUT system.

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### 3.4. Description Of Test Channels And Test Modes

Test channels:

| Test Mode           | UL Channel     | UL Channel No. | UL Frequency (MHz) |
|---------------------|----------------|----------------|--------------------|
| GSM/GPRS/EGPRS 850  | Low Channel    | 128            | 824.2              |
|                     | Middle Channel | 190            | 836.6              |
|                     | High Channel   | 251            | 848.8              |
| GSM/GPRS/EGPRS 1900 | Low Channel    | 512            | 1850.2             |
|                     | Middle Channel | 661            | 1880.0             |
|                     | High Channel   | 810            | 1909.8             |
| WCDMA Band 2        | Low Channel    | 9262           | 1852.4             |
|                     | Middle Channel | 9400           | 1880.0             |
|                     | High Channel   | 9538           | 1907.6             |
| WCDMA Band 4        | Low Channel    | 1312           | 1712.4             |
|                     | Middle Channel | 1412           | 1732.6             |
|                     | High Channel   | 1513           | 1752.6             |
| WCDMA Band 5        | Low Channel    | 4132           | 826.4              |
|                     | Middle Channel | 4182           | 836.4              |
|                     | High Channel   | 4233           | 846.6              |

| LTE Band2    |                  |            |                |
|--------------|------------------|------------|----------------|
| Test Channel | BW(MHz)          | UL Channel | Frequency(MHz) |
| Low Range    | 1.4              | 18607      | 1850.7         |
|              | 3                | 18615      | 1851.5         |
|              | 5                | 18625      | 1852.5         |
|              | 10               | 18650      | 1855           |
|              | 15               | 18675      | 1857.5         |
|              | 20               | 18700      | 1860           |
| Mid Range    | 1.4/3/5/10/15/20 | 18900      | 1880           |
| High Range   | 1.4              | 19193      | 1909.3         |
|              | 3                | 19185      | 1908.5         |
|              | 5                | 19175      | 1907.5         |
|              | 10               | 19150      | 1905           |
|              | 15               | 19125      | 1902.5         |
|              | 20               | 19100      | 1900           |

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| LTE Band4    |                  |            |                |
|--------------|------------------|------------|----------------|
| Test Channel | BW(MHz)          | UL Channel | Frequency(MHz) |
| Low Range    | 1.4              | 19957      | 1710.7         |
|              | 3                | 19965      | 1711.5         |
|              | 5                | 19975      | 1712.5         |
|              | 10               | 20000      | 1715           |
|              | 15               | 20025      | 1717.5         |
|              | 20               | 20050      | 1720           |
| Mid Range    | 1.4/3/5/10/15/20 | 20175      | 1732.5         |
| High Range   | 1.4              | 20393      | 1754.3         |
|              | 3                | 20385      | 1753.5         |
|              | 5                | 20375      | 1752.5         |
|              | 10               | 20350      | 1750           |
|              | 15               | 20325      | 1747.5         |
|              | 20               | 20300      | 1745           |

| LTE Band 5   |            |            |                |
|--------------|------------|------------|----------------|
| Test Channel | BW(MHz)    | UL Channel | Frequency(MHz) |
| Low Range    | 1.4        | 20407      | 824.7          |
|              | 3          | 20415      | 825.5          |
|              | 5          | 20425      | 826.5          |
|              | 10         | 20450      | 829            |
| Mid Range    | 1.4/3/5/10 | 20525      | 836.5          |
| High Range   | 1.4        | 20643      | 848.3          |
|              | 3          | 20635      | 847.5          |
|              | 5          | 20625      | 846.5          |
|              | 10         | 20600      | 844            |

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| LTE Band 7   |            |            |                |
|--------------|------------|------------|----------------|
| Test Channel | BW(MHz)    | UL Channel | Frequency(MHz) |
| Low Range    | 5          | 20775      | 2502.5         |
|              | 10         | 20800      | 2505           |
|              | 15         | 20825      | 2507.5         |
|              | 20         | 20850      | 2510           |
| Mid Range    | 5/10/15/20 | 21100      | 2535           |
| High Range   | 5          | 21425      | 2567.5         |
|              | 10         | 21400      | 2565           |
|              | 15         | 21375      | 2562.5         |
|              | 20         | 21350      | 2560           |

| LTE Band 12  |            |            |                |
|--------------|------------|------------|----------------|
| Test Channel | BW(MHz)    | UL Channel | Frequency(MHz) |
| Low Range    | 1.4        | 23017      | 699.7          |
|              | 3          | 23025      | 700.5          |
|              | 5          | 23035      | 701.5          |
|              | 10         | 23060      | 704            |
| Mid Range    | 1.4/3/5/10 | 23095      | 707.5          |
| High Range   | 1.4        | 23173      | 715.3          |
|              | 3          | 23165      | 714.5          |
|              | 5          | 23155      | 713.5          |
|              | 10         | 23130      | 711            |

| LTE Band 13  |         |            |                |
|--------------|---------|------------|----------------|
| Test Channel | BW(MHz) | UL Channel | Frequency(MHz) |
| Low Range    | 5       | 23205      | 779.5          |
| Mid Range    | 5/10    | 23230      | 782            |
| High Range   | 5       | 23255      | 784.5          |

| LTE Band 17  |         |            |                |
|--------------|---------|------------|----------------|
| Test Channel | BW(MHz) | UL Channel | Frequency(MHz) |
| Low Range    | 5       | 23755      | 706.5          |
|              | 10      | 23780      | 709            |
| Mid Range    | 5/10    | 23790      | 710            |
| High Range   | 5       | 23825      | 713.5          |
|              | 10      | 23800      | 711            |

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| LTE Band25   |                  |            |                |
|--------------|------------------|------------|----------------|
| Test Channel | BW(MHz)          | UL Channel | Frequency(MHz) |
| Low Range    | 1.4              | 26047      | 1850.7         |
|              | 3                | 26055      | 1851.5         |
|              | 5                | 26065      | 1852.5         |
|              | 10               | 26090      | 1855           |
|              | 15               | 26115      | 1857.5         |
|              | 20               | 26140      | 1860           |
| Mid Range    | 1.4/3/5/10/15/20 | 26365      | 1880           |
| High Range   | 1.4              | 26683      | 1909.3         |
|              | 3                | 26675      | 1908.5         |
|              | 5                | 26665      | 1907.5         |
|              | 10               | 26640      | 1905           |
|              | 15               | 26615      | 1902.5         |
|              | 20               | 26590      | 1900           |

| LTE Band26(814-824MHz) |            |            |                |
|------------------------|------------|------------|----------------|
| Test Channel           | BW(MHz)    | UL Channel | Frequency(MHz) |
| Low Range              | 1.4        | 26697      | 814.7          |
|                        | 3          | 26705      | 815.5          |
|                        | 5          | 26715      | 816.5          |
|                        | 10         | 26740      | 819            |
| Mid Range              | 1.4/3/5/10 | 26740      | 819            |
| High Range             | 1.4        | 26783      | 823.3          |
|                        | 3          | 26775      | 822.5          |
|                        | 5          | 26765      | 821.5          |
|                        | 10         | 26740      | 819            |

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| LTE Band26(824-849MHz) |               |            |                |
|------------------------|---------------|------------|----------------|
| Test Channel           | BW(MHz)       | UL Channel | Frequency(MHz) |
| Low Range              | 1.4           | 26797      | 824.7          |
|                        | 3             | 26805      | 825.5          |
|                        | 5             | 26815      | 826.5          |
|                        | 10            | 26840      | 829            |
|                        | 15            | 26865      | 831.5          |
| Mid Range              | 1.4/3/5/10/15 | 26915      | 836.5          |
| High Range             | 1.4           | 27033      | 848.3          |
|                        | 3             | 27025      | 847.5          |
|                        | 5             | 27015      | 846.5          |
|                        | 10            | 26990      | 844            |
|                        | 15            | 26965      | 841.5          |

| LTE Band 38  |            |            |                |
|--------------|------------|------------|----------------|
| Test Channel | BW(MHz)    | UL Channel | Frequency(MHz) |
| Low Range    | 5          | 37775      | 2572.5         |
|              | 10         | 37800      | 2575           |
|              | 15         | 37825      | 2577.5         |
|              | 20         | 37850      | 2580           |
| Mid Range    | 5/10/15/20 | 38000      | 2595           |
| High Range   | 5          | 38225      | 2617.5         |
|              | 10         | 38200      | 2615           |
|              | 15         | 38175      | 2612.5         |
|              | 20         | 38150      | 2610           |

| LTE Band 41  |            |            |                |
|--------------|------------|------------|----------------|
| Test Channel | BW(MHz)    | UL Channel | Frequency(MHz) |
| Low Range    | 5          | 39675      | 2498.5         |
|              | 10         | 39700      | 2501           |
|              | 15         | 39725      | 2503.5         |
|              | 20         | 39750      | 2506           |
| Mid Range    | 5/10/15/20 | 40620      | 2593           |
| High Range   | 5          | 41565      | 2687.5         |
|              | 10         | 41540      | 2685           |
|              | 15         | 41515      | 2682.5         |
|              | 20         | 41490      | 2680           |

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| LTE Band66   |                  |            |                |
|--------------|------------------|------------|----------------|
| Test Channel | BW(MHz)          | UL Channel | Frequency(MHz) |
| Low Range    | 1.4              | 131979     | 1710.7         |
|              | 3                | 131987     | 1711.5         |
|              | 5                | 131997     | 1712.5         |
|              | 10               | 132022     | 1715           |
|              | 15               | 132047     | 1717.5         |
|              | 20               | 132322     | 1720           |
| Mid Range    | 1.4/3/5/10/15/20 | 132322     | 1745           |
| High Range   | 1.4              | 132665     | 1779.3         |
|              | 3                | 132657     | 1778.5         |
|              | 5                | 132647     | 1777.5         |
|              | 10               | 132622     | 1775           |
|              | 15               | 132597     | 1772.5         |
|              | 20               | 132572     | 1770           |

Note 1: BPSK&amp;QPSK&amp;16QAM modulation has been measured;

Note 2: The worst condition was recorded in the test report if no other modes test data.

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### 3.5. Equipment Modifications

Not available for this EUT intended for grant.

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#### 4. SUMMARY OF TEST REQUIREMENTS AND RESULTS

| No. | Description                            | FCC Part No.                                                                      | Test Verdict | Remark |
|-----|----------------------------------------|-----------------------------------------------------------------------------------|--------------|--------|
| 1   | Conducted RF Output Power              | 2.1046                                                                            | Pass         | --     |
| 2   | Effective (Isotropic) Radiated Power   | 2.1046<br>22.913(a)<br>24.232(c)<br>27.50<br>90.635(b)<br>90.542(a)<br>90.1321(a) | Pass         | --     |
| 3   | Peak to Average Ratio                  | 2.1046<br>22.913(d)<br>24.232(d)<br>27.50(d)                                      | Pass         | --     |
| 4   | Occupied Bandwidth                     | 2.1049<br>22.917(b)<br>24.238(b)<br>27.53<br>90.209                               | Pass         | --     |
| 5   | Frequency Stability                    | 2.1055<br>22.355<br>24.235<br>27.54<br>90.213                                     | Pass         | --     |
| 6   | Spurious Emission at Antenna Terminals | 2.1051<br>22.917<br>24.238<br>27.53<br>90.691<br>90.543                           | Pass         | --     |
| 7   | Band Edge                              | 2.1051<br>22.917<br>24.238<br>27.53<br>90.691<br>90.543                           | Pass         | --     |
| 8   | Field Strength of Spurious Radiation   | 2.1053<br>22.917<br>24.238<br>27.53<br>90.691<br>90.543                           | Pass         | --     |

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## 5. MEASUREMENT INSTRUMENTS

| NAME OF EQUIPMENT                    | MANUFACTURER           | MODEL        | SERIAL NUMBER | Calibration Date | Calibration Due. |
|--------------------------------------|------------------------|--------------|---------------|------------------|------------------|
| EMI Test Receiver                    | R&S                    | ESCI         | 100005        | 11/04/2024       | 11/03/2025       |
| LISN                                 | AFJ                    | LS16         | 16010222119   | 11/04/2024       | 11/03/2025       |
| LISN(EUT)                            | Mestec                 | AN3016       | 04/10040      | 11/04/2024       | 11/03/2025       |
| Universal Radio Communication Tester | R&S                    | CMU 200      | 1100.0008.02  | 11/04/2024       | 11/03/2025       |
| Coaxial cable                        | Megalon                | LMR400       | N/A           | 11/04/2024       | 11/03/2025       |
| GPIO cable                           | Megalon                | GPIO         | N/A           | 11/04/2024       | 11/03/2025       |
| Spectrum Analyzer                    | R&S                    | FSU          | 100114        | 11/04/2024       | 11/03/2025       |
| Pre Amplifier                        | H.P.                   | HP8447E      | 2945A02715    | 11/04/2024       | 11/03/2025       |
| Pre-Amplifier                        | CDSI                   | PAP-1G18-38  | --            | 11/04/2024       | 11/03/2025       |
| Loop Antenna                         | R&S                    | HFH2-Z2      | 100296        | 11/04/2024       | 11/03/2025       |
| Bi-log Antenna                       | SCHWARZBECK            | VULB9168     | 01488         | 11/04/2024       | 11/03/2025       |
| 9*6*6 Anechoic                       | --                     | --           | --            | 11/04/2024       | 11/03/2025       |
| Horn Antenna                         | COMPLIANCE ENGINEERING | CE18000      | --            | 11/04/2024       | 11/03/2025       |
| Horn Antenna                         | SCHWARZBECK            | BBHA9120D    | 9120D-631     | 11/04/2024       | 11/03/2025       |
| Power meter                          | Anritsu                | ML2487A      | 6K00003613    | 11/04/2024       | 11/03/2025       |
| Power meter                          | Anritsu                | MA2491A      | 32263         | 11/04/2024       | 11/03/2025       |
| Cable                                | TIME MICROWAVE         | LMR-400      | N-TYPE04      | 11/04/2024       | 11/03/2025       |
| System-Controller                    | CCS                    | N/A          | N/A           | N.C.R            | N.C.R            |
| Turn Table                           | CCS                    | N/A          | N/A           | N.C.R            | N.C.R            |
| Antenna Tower                        | CCS                    | N/A          | N/A           | N.C.R            | N.C.R            |
| RF cable                             | Murata                 | MXHQ87WA3000 | -             | 11/04/2024       | 11/03/2025       |
| Loop Antenna                         | EMCO                   | 6502         | 00042960      | 11/04/2024       | 11/03/2025       |
| Wideband Radio Communication Tester  | R&S                    | CMW 500      | 103974        | 11/04/2024       | 11/03/2025       |
| Horn Antenna                         | SCHWARZBECK            | BBHA 9170    | 1123          | 11/04/2024       | 11/03/2025       |
| H & T Chamber                        | Guangzhou gongwen      | GDJS-500-40  | 0329          | 11/04/2024       | 11/03/2025       |
| UXM 5G Wireless Test Platform        | KEYSIGHT               | E7515B       | MY60192341    | 11/04/2024       | 11/03/2025       |
| Anechoic chamber                     | SAEMC                  | 966          | -             | 11/04/2024       | 11/03/2025       |
| Spectrum Analyzer                    | KEYSIGHT               | N9010B       | MY60241089    | 11/04/2024       | 11/03/2025       |

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## 6. Transmitter Radiated Power (EIRP/ERP)

### Test limit:

FCC § 2.1046 & 22.913(a) & 24.232(c) & 27.50(a) & 27.50(b) & 27.50(c) & 27.50(d) & 27.50(h) & 27.50(j) & 27.50(k) & 90.635(b) & 90.542(a)

According to FCC section 22.913(a) (5), the Effective Radiated Power (ERP) of mobile transmitters and auxiliary test transmitters must not exceed 7 watts.

According to FCC section 24.232(c), mobile and portable stations are limited to 2 watts EIRP and the equipment must employ a means for limiting power to the minimum necessary for successful communications.

According to FCC section 27.50(a) (3), for mobile and portable stations transmitting in the 2305-2315MHz band or the 2350-2360MHz band, the average EIRP must not exceed 50 mill watts within any 1 megahertz of authorized bandwidth, except that for mobile and portable stations compliant with 3GPP LTE standards. For mobile and portable stations using time division depleting (TDD) technology, the duty cycle must not exceed 38 percent in the 2305-2315 MHz and 2350-2360 MHz bands.

FCC section 27.50(b) (10), portable stations (hand-held devices) transmitting in the 746-757MHz, 776-788MHz, and 805-806MHz bands are limited to 3 watts ERP.

FCC section 27.50(c) (10), portable stations (hand-held devices) in the 600MHz uplink band and the 698-746MHz band, and fixed and mobile stations in the 600MHz uplink band are limited to 3 watts ERP.

FCC section 27.50(d) (4), fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP. Fixed stations operating in the 1710-1755 MHz band are limited to a maximum antenna height of 10 meters above ground. Mobile and portable stations operating in these bands must employ a means for limiting power to the minimum necessary for successful communications.

(7) Fixed, mobile, and portable (hand-held) stations operating in the 2000-2020 MHz band are limited to 2 watts EIRP.

And FCC section 27.50(h) (2), for mobile and other user stations, mobile stations are limited to 2.0 watts EIRP. All user stations are limited to 2.0 watts transmitter output power.

FCC section 27.50(j) (3), for mobile, and portable (hand-held) stations operating in the 3700-3980 MHz band are limited to 1 watt EIRP.

FCC section 27.50(k) (3), Mobile devices are limited to 1Watt (30 dBm) EIRP in the 3450-3550 MHz band.

### Test procedure:

#### Description of the Conducted Output Power Measurement

The EUT is coupled to the SS with attenuator through power splitter; the RF load attached to EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading. A system simulator is used to establish communication with the EUT, and its parameters are set to force the EUT transmitting at maximum output power. The measured power in the radio frequency on the transmitter output terminals shall be reported.

The relevant equation for determining the conducted measured value is:

Conducted Output Power Value (dBm) = Measured Value (dBm) + Path Loss (dB)

where:

Conducted Output Power Value = final conducted measured value in the conducted power test, in dBm;  
Measured Value = measured conducted power received by spectrum analyzer or power meter, in dBm;  
Path Loss = signal attenuation in the connecting cable between the transmitter and spectrum analyzer or power meter, including external cable loss, in dB;

During the test, the data of Path Loss (dB) is added in the spectrum analyzer or power meter, so Measured Value (dBm) is the final values which contains the data of Path Loss (dB).

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**Description of the Transmitter Radiated Power Measurement**

In many cases, the RF output power limits for licensed digital transmission devices is specified in terms of effective radiated power (ERP) or equivalent isotropic radiated power (EIRP). Typically, ERP is specified when the operating frequency is less than or equal to 1 GHz and EIRP is specified when the operating frequency is greater than 1 GHz. Both are determined by adding the transmit antenna gain to the conducted RF output power with the primary difference between the two being that when determining the ERP, the transmit antenna gain is referenced to a dipole antenna (i.e., dBd) whereas when determining the EIRP, the transmit antenna gain is referenced to an isotropic antenna (dBi).

**Final measurement calculation as below**

The relevant equation for determining the ERP or EIRP from the conducted RF output power measured using the guidance provided above is:

$$\text{ERP/EIRP} = P_{\text{Meas}} + \text{GT} - \text{LC}$$

where:

ERP/EIRP = effective or equivalent radiated power, respectively (expressed in the same units as P<sub>Meas</sub>, typically dBW or dBm);

P<sub>Meas</sub> = measured transmitter output power or PSD, in dBm or dBW;

GT = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);

dBd (ERP)=dBi (EIRP) -2.15 dB

LC = signal attenuation in the connecting cable between the transmitter and antenna, in dB.

For devices utilizing multiple antennas, KDB 662911 provides guidance for determining the effective array transmit antenna gain term to be used in the above equation.

The relevant equation for determining the ERP/EIRP from the radiated RF output power is:

$$\text{ERP/EIRP (dBm)} = \text{SA Read Value (dBm)} + \text{Correction Factor (dB)}$$

where:

ERP/EIRP = effective or equivalent radiated power, in dBm;

SA Read Value = measured transmitter power received by EMI receiver or spectrum analyzer, in dBm;

Correction Factor = total correction factor including cable loss, in dB;

During the test, the data of Correction Factor (dB) is added in the EMI receiver or spectrum analyzer, so SA Read Value (dBm) is the final values which contains the data of Correction Factor (dB).

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### Test Result

GSM Mode Test Data:

| Mode     |            | Frequency (MHz) | Conducted Output AV Power (dBm) | Antenna Gain (dBi) | Antenna Gain (dBd) | ERP (dBm) | Limit (dBm) | Verdict |
|----------|------------|-----------------|---------------------------------|--------------------|--------------------|-----------|-------------|---------|
| GSM850   |            | 824.2           | 32.50                           | 0.5                | -1.65              | 30.85     | 38.45       | Pass    |
|          |            | 836.6           | 32.24                           | 0.5                | -1.65              | 30.59     | 38.45       | Pass    |
|          |            | 848.8           | 31.89                           | 0.5                | -1.65              | 30.24     | 38.45       | Pass    |
| GPRS850  | 1 Tx Slots | 824.2           | 29.36                           | 0.5                | -1.65              | 27.71     | 38.45       | Pass    |
|          |            | 836.6           | 29.67                           | 0.5                | -1.65              | 28.02     | 38.45       | Pass    |
|          |            | 848.8           | 29.85                           | 0.5                | -1.65              | 28.20     | 38.45       | Pass    |
|          | 2 Tx Slots | 824.2           | 29.38                           | 0.5                | -1.65              | 27.73     | 38.45       | Pass    |
|          |            | 836.6           | 30.37                           | 0.5                | -1.65              | 28.72     | 38.45       | Pass    |
|          |            | 848.8           | 29.92                           | 0.5                | -1.65              | 28.27     | 38.45       | Pass    |
|          | 3 Tx Slots | 824.2           | 29.32                           | 0.5                | -1.65              | 27.67     | 38.45       | Pass    |
|          |            | 836.6           | 30.3                            | 0.5                | -1.65              | 28.65     | 38.45       | Pass    |
|          |            | 848.8           | 30.3                            | 0.5                | -1.65              | 28.65     | 38.45       | Pass    |
|          | 4 Tx Slots | 824.2           | 29.28                           | 0.5                | -1.65              | 27.63     | 38.45       | Pass    |
|          |            | 836.6           | 30.07                           | 0.5                | -1.65              | 28.42     | 38.45       | Pass    |
|          |            | 848.8           | 29.71                           | 0.5                | -1.65              | 28.06     | 38.45       | Pass    |
| EGPRS850 | 1 Tx Slots | 824.2           | 27.95                           | 0.5                | -1.65              | 26.30     | 38.45       | Pass    |
|          |            | 836.6           | 27.21                           | 0.5                | -1.65              | 25.56     | 38.45       | Pass    |
|          |            | 848.8           | 26.35                           | 0.5                | -1.65              | 24.70     | 38.45       | Pass    |
|          | 2 Tx Slots | 824.2           | 27.45                           | 0.5                | -1.65              | 25.80     | 38.45       | Pass    |
|          |            | 836.6           | 26.42                           | 0.5                | -1.65              | 24.77     | 38.45       | Pass    |
|          |            | 848.8           | 26.74                           | 0.5                | -1.65              | 25.09     | 38.45       | Pass    |
|          | 3 Tx Slots | 824.2           | 27.85                           | 0.5                | -1.65              | 26.20     | 38.45       | Pass    |
|          |            | 836.6           | 27.25                           | 0.5                | -1.65              | 25.60     | 38.45       | Pass    |
|          |            | 848.8           | 26.98                           | 0.5                | -1.65              | 25.33     | 38.45       | Pass    |
|          | 4 Tx Slots | 824.2           | 26.7                            | 0.5                | -1.65              | 25.05     | 38.45       | Pass    |
|          |            | 836.6           | 27.5                            | 0.5                | -1.65              | 25.85     | 38.45       | Pass    |
|          |            | 848.8           | 28.02                           | 0.5                | -1.65              | 26.37     | 38.45       | Pass    |

| Mode       |            | Frequency (MHz) | Conducted Output AV Power (dBm) | Antenna Gain (dBi) | EIRP (dBm) | Limt (dBm) | Verdict |
|------------|------------|-----------------|---------------------------------|--------------------|------------|------------|---------|
| GSM1900    |            | 1850.2          | 30.00                           | -1                 | 29.00      | 33.01      | Pass    |
|            |            | 1880            | 29.7                            | -1                 | 28.70      | 33.01      | Pass    |
|            |            | 1909.8          | 29.32                           | -1                 | 28.32      | 33.01      | Pass    |
| GPRS1900   | 1 Tx Slots | 1850.2          | 26.44                           | -1                 | 25.44      | 33.01      | Pass    |
|            |            | 1880            | 26.95                           | -1                 | 25.95      | 33.01      | Pass    |
|            |            | 1909.8          | 26.77                           | -1                 | 25.77      | 33.01      | Pass    |
|            | 2 Tx Slots | 1850.2          | 26.4                            | -1                 | 25.40      | 33.01      | Pass    |
|            |            | 1880            | 28.07                           | -1                 | 27.07      | 33.01      | Pass    |
|            |            | 1909.8          | 27.04                           | -1                 | 26.04      | 33.01      | Pass    |
|            | 3 Tx Slots | 1850.2          | 26.97                           | -1                 | 25.97      | 33.01      | Pass    |
|            |            | 1880            | 27.5                            | -1                 | 26.50      | 33.01      | Pass    |
|            |            | 1909.8          | 28.28                           | -1                 | 27.28      | 33.01      | Pass    |
|            | 4 Tx Slots | 1850.2          | 26.33                           | -1                 | 25.33      | 33.01      | Pass    |
|            |            | 1880            | 26.82                           | -1                 | 25.82      | 33.01      | Pass    |
|            |            | 1909.8          | 27.37                           | -1                 | 26.37      | 33.01      | Pass    |
| EGPRS1900  | 1 Tx Slots | 1850.2          | 25.19                           | -1                 | 24.19      | 33.01      | Pass    |
|            |            | 1880            | 24.28                           | -1                 | 23.28      | 33.01      | Pass    |
|            |            | 1909.8          | 25.21                           | -1                 | 24.21      | 33.01      | Pass    |
|            | 2 Tx Slots | 1850.2          | 24.41                           | -1                 | 23.41      | 33.01      | Pass    |
|            |            | 1880            | 25.66                           | -1                 | 24.66      | 33.01      | Pass    |
|            |            | 1909.8          | 25.31                           | -1                 | 24.31      | 33.01      | Pass    |
|            | 3 Tx Slots | 1850.2          | 24.95                           | -1                 | 23.95      | 33.01      | Pass    |
|            |            | 1880            | 24.97                           | -1                 | 23.97      | 33.01      | Pass    |
|            |            | 1909.8          | 25.68                           | -1                 | 24.68      | 33.01      | Pass    |
| 4 Tx Slots |            | 1850.2          | 25.4                            | -1                 | 24.40      | 33.01      | Pass    |
|            | 1880       | 25.27           | -1                              | 24.27              | 33.01      | Pass       |         |

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|  |  |        |       |    |       |       |      |
|--|--|--------|-------|----|-------|-------|------|
|  |  | 1909.8 | 23.99 | -1 | 22.99 | 33.01 | Pass |
|--|--|--------|-------|----|-------|-------|------|

Note 1: For the GPRS and EGPRS mode, all slots were tested and just the worst data were recorded in this table.

Note 2:  $ERP/EIRP = P_{Meas} + GT - LC$

ERP/EIRP = effective or equivalent radiated power, respectively (expressed in the same units as  $P_{Meas}$ , typically dBW or dBm);

$P_{Meas}$  = measured transmitter output power or PSD, in dBm or dBW;

GT = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);

LC = signal attenuation in the connecting cable between the transmitter and antenna, in dB.

$ERP = EIRP - 2.15$ ; where ERP and EIRP are expressed in consistent units.

Note 3: Set PCL to 5 for GSM/GPRS 850 (power class 4) and 0 for GSM/GPRS 1900 (power class 1). Set PCL to 8 for EGPRS850 (power class E2) and 2 for EGPRS1900 (power class E2)

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## WCDMA Mode Test Data:

| Mode Test Data: |            |            |                 |                                 |                    |            |             |         |      |
|-----------------|------------|------------|-----------------|---------------------------------|--------------------|------------|-------------|---------|------|
| Band            | Mode       |            | Frequency (MHz) | Conducted Output AV Power (dBm) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Verdict |      |
| Band 2          | RMC 12.2K  |            | 1852.4          | 22.85                           | -1                 | 21.85      | 33.01       | Pass    |      |
|                 |            |            | 1880            | 23.34                           | -1                 | 22.34      | 33.01       | Pass    |      |
|                 |            |            | 1907.6          | 23.16                           | -1                 | 22.16      | 33.01       | Pass    |      |
|                 | HSDPA      | 1 Tx Slots | 1852.4          | 22.88                           | -1                 | 21.88      | 33.01       | Pass    |      |
|                 |            |            | 1880            | 23.18                           | -1                 | 22.18      | 33.01       | Pass    |      |
|                 |            |            | 1907.6          | 23.46                           | -1                 | 22.46      | 33.01       | Pass    |      |
|                 |            | 2 Tx Slots | 1852.4          | 23.23                           | -1                 | 22.23      | 33.01       | Pass    |      |
|                 |            |            | 1880            | 23.00                           | -1                 | 22.00      | 33.01       | Pass    |      |
|                 |            |            | 1907.6          | 23.02                           | -1                 | 22.02      | 33.01       | Pass    |      |
|                 |            | 3 Tx Slots | 1852.4          | 22.51                           | -1                 | 21.51      | 33.01       | Pass    |      |
|                 |            |            | 1880            | 22.54                           | -1                 | 21.54      | 33.01       | Pass    |      |
|                 |            |            | 1907.6          | 22.72                           | -1                 | 21.72      | 33.01       | Pass    |      |
|                 |            | 4 Tx Slots | 1852.4          | 23.22                           | -1                 | 22.22      | 33.01       | Pass    |      |
|                 |            |            | 1880            | 23.26                           | -1                 | 22.26      | 33.01       | Pass    |      |
|                 |            |            | 1907.6          | 23.23                           | -1                 | 22.23      | 33.01       | Pass    |      |
|                 |            | HSUPA      | 1 Tx Slots      | 1852.4                          | 22.71              | -1         | 21.71       | 33.01   | Pass |
|                 |            |            |                 | 1880                            | 22.51              | -1         | 21.51       | 33.01   | Pass |
|                 |            |            |                 | 1907.6                          | 23.32              | -1         | 22.32       | 33.01   | Pass |
|                 |            |            | 2 Tx Slots      | 1852.4                          | 22.59              | -1         | 21.59       | 33.01   | Pass |
|                 |            |            |                 | 1880                            | 23.16              | -1         | 22.16       | 33.01   | Pass |
|                 |            |            |                 | 1907.6                          | 22.6               | -1         | 21.60       | 33.01   | Pass |
|                 | 3 Tx Slots |            | 1852.4          | 22.76                           | -1                 | 21.76      | 33.01       | Pass    |      |
|                 |            |            | 1880            | 22.95                           | -1                 | 21.95      | 33.01       | Pass    |      |
|                 |            |            | 1907.6          | 23.09                           | -1                 | 22.09      | 33.01       | Pass    |      |
|                 | 4 Tx Slots |            | 1852.4          | 23.33                           | -1                 | 22.33      | 33.01       | Pass    |      |
|                 |            |            | 1880            | 23.27                           | -1                 | 22.27      | 33.01       | Pass    |      |
|                 |            |            | 1907.6          | 23.33                           | -1                 | 22.33      | 33.01       | Pass    |      |
|                 | 5 Tx Slots | 1852.4     | 23.2            | -1                              | 22.20              | 33.01      | Pass        |         |      |
|                 |            | 1880       | 23.41           | -1                              | 22.41              | 33.01      | Pass        |         |      |
|                 |            | 1907.6     | 22.63           | -1                              | 21.63              | 33.01      | Pass        |         |      |

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| Band   | Mode      | Frequency (MHz) | Conducted Output AV Power (dBm) | Antenna Gain (dBi) | EIRP (dBm) | Limit (dBm) | Verdict |
|--------|-----------|-----------------|---------------------------------|--------------------|------------|-------------|---------|
| Band 4 | RMC 12.2K | 1712.4          | 23.32                           | -1                 | 22.32      | 30.00       | Pass    |
|        |           | 1732.6          | 22.98                           | -1                 | 21.98      | 30.00       | Pass    |
|        |           | 1752.6          | 22.53                           | -1                 | 21.53      | 30.00       | Pass    |
|        | HSDPA     | 1 Tx Slots      | 1712.4                          | -1                 | 22.32      | 30.00       | Pass    |
|        |           |                 | 1732.6                          | -1                 | 21.98      | 30.00       | Pass    |
|        |           |                 | 1752.6                          | -1                 | 21.53      | 30.00       | Pass    |
|        |           | 2 Tx Slots      | 1712.4                          | -1                 | 21.84      | 30.00       | Pass    |
|        |           |                 | 1732.6                          | -1                 | 21.80      | 30.00       | Pass    |
|        |           |                 | 1752.6                          | -1                 | 21.77      | 30.00       | Pass    |
|        |           | 3 Tx Slots      | 1712.4                          | -1                 | 21.97      | 30.00       | Pass    |
|        |           |                 | 1732.6                          | -1                 | 21.63      | 30.00       | Pass    |
|        |           |                 | 1752.6                          | -1                 | 22.20      | 30.00       | Pass    |
|        |           | 4 Tx Slots      | 1712.4                          | -1                 | 21.86      | 30.00       | Pass    |
|        |           |                 | 1732.6                          | -1                 | 22.38      | 30.00       | Pass    |
|        |           |                 | 1752.6                          | -1                 | 21.74      | 30.00       | Pass    |
|        | HSUPA     | 1 Tx Slots      | 1712.4                          | -1                 | 22.06      | 30.00       | Pass    |
|        |           |                 | 1732.6                          | -1                 | 21.79      | 30.00       | Pass    |
|        |           |                 | 1752.6                          | -1                 | 22.40      | 30.00       | Pass    |
|        |           | 2 Tx Slots      | 1712.4                          | -1                 | 22.10      | 30.00       | Pass    |
|        |           |                 | 1732.6                          | -1                 | 22.07      | 30.00       | Pass    |
|        |           |                 | 1752.6                          | -1                 | 21.70      | 30.00       | Pass    |
|        |           | 3 Tx Slots      | 1712.4                          | -1                 | 21.92      | 30.00       | Pass    |
|        |           |                 | 1732.6                          | -1                 | 22.42      | 30.00       | Pass    |
|        |           |                 | 1752.6                          | -1                 | 21.93      | 30.00       | Pass    |
|        |           | 4 Tx Slots      | 1712.4                          | -1                 | 21.90      | 30.00       | Pass    |
|        |           |                 | 1732.6                          | -1                 | 21.75      | 30.00       | Pass    |
|        |           |                 | 1752.6                          | -1                 | 22.40      | 30.00       | Pass    |
|        |           | 5 Tx Slots      | 1712.4                          | -1                 | 22.45      | 30.00       | Pass    |
|        |           |                 | 1732.6                          | -1                 | 21.52      | 30.00       | Pass    |
|        |           |                 | 1752.6                          | -1                 | 22.17      | 30.00       | Pass    |

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| Band   | Mode       | Frequency (MHz) | Conducted Output AV Power (dBm) | Antenna Gain (dBi) | Antenna Gain (dBd) | ERP (dBm)    | Limit (dBm) | Verdict |
|--------|------------|-----------------|---------------------------------|--------------------|--------------------|--------------|-------------|---------|
| Band 5 | RMC 12.2K  | 826.4           | <b>22.88</b>                    | 0.5                | -1.65              | <b>21.23</b> | 38.45       | Pass    |
|        |            | 836.4           | 22.44                           | 0.5                | -1.65              | 20.79        | 38.45       | Pass    |
|        |            | 846.6           | 22.81                           | 0.5                | -1.65              | 21.16        | 38.45       | Pass    |
|        | 1 Tx Slots | 826.4           | 22.51                           | 0.5                | -1.65              | 20.86        | 38.45       | Pass    |
|        |            | 836.4           | 22.55                           | 0.5                | -1.65              | 20.90        | 38.45       | Pass    |
|        |            | 846.6           | 22.23                           | 0.5                | -1.65              | 20.58        | 38.45       | Pass    |
|        |            | 826.4           | 22.3                            | 0.5                | -1.65              | 20.65        | 38.45       | Pass    |
|        |            | 836.4           | 22.45                           | 0.5                | -1.65              | 20.80        | 38.45       | Pass    |
|        |            | 846.6           | 22.1                            | 0.5                | -1.65              | 20.45        | 38.45       | Pass    |
|        | 2 Tx Slots | 826.4           | 22.13                           | 0.5                | -1.65              | 20.48        | 38.45       | Pass    |
|        |            | 836.4           | 22.2                            | 0.5                | -1.65              | 20.55        | 38.45       | Pass    |
|        |            | 846.6           | 22.83                           | 0.5                | -1.65              | 21.18        | 38.45       | Pass    |
|        |            | 826.4           | 22.34                           | 0.5                | -1.65              | 20.69        | 38.45       | Pass    |
|        |            | 836.4           | 22.33                           | 0.5                | -1.65              | 20.68        | 38.45       | Pass    |
|        |            | 846.6           | 22.02                           | 0.5                | -1.65              | 20.37        | 38.45       | Pass    |
|        | HSUPA      | 826.4           | 22.42                           | 0.5                | -1.65              | 20.77        | 38.45       | Pass    |
|        |            | 836.4           | 22.16                           | 0.5                | -1.65              | 20.51        | 38.45       | Pass    |
|        |            | 846.6           | 22.23                           | 0.5                | -1.65              | 20.58        | 38.45       | Pass    |
|        |            | 826.4           | 22.77                           | 0.5                | -1.65              | 21.12        | 38.45       | Pass    |
|        |            | 836.4           | 22.63                           | 0.5                | -1.65              | 20.98        | 38.45       | Pass    |
|        |            | 846.6           | 22.48                           | 0.5                | -1.65              | 20.83        | 38.45       | Pass    |
|        |            | 826.4           | 22.79                           | 0.5                | -1.65              | 21.14        | 38.45       | Pass    |
|        |            | 836.4           | 22.66                           | 0.5                | -1.65              | 21.01        | 38.45       | Pass    |
|        |            | 846.6           | 22.56                           | 0.5                | -1.65              | 20.91        | 38.45       | Pass    |
|        |            | 826.4           | 22.42                           | 0.5                | -1.65              | 20.77        | 38.45       | Pass    |
|        |            | 836.4           | 22.69                           | 0.5                | -1.65              | 21.04        | 38.45       | Pass    |
|        |            | 846.6           | 22.11                           | 0.5                | -1.65              | 20.46        | 38.45       | Pass    |
|        |            | 826.4           | 22.39                           | 0.5                | -1.65              | 20.74        | 38.45       | Pass    |
|        |            | 836.4           | 22.72                           | 0.5                | -1.65              | 21.07        | 38.45       | Pass    |
|        |            | 846.6           | 22.55                           | 0.5                | -1.65              | 20.90        | 38.45       | Pass    |

Note 1: For the HSDPA and HSUPA mode, all subtests were tested and just the worst data we rerecorded in this table.

Note 2: ERP/EIRP = P<sub>Meas</sub> + GT - LC

ERP/EIRP = effective or equivalent radiated power, respectively (expressed in the same units as P<sub>Meas</sub>, typically dBW or dBm);

P<sub>Meas</sub> = measured transmitter output power or PSD, in dBm or dBW;

GT = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);

LC = signal attenuation in the connecting cable between the transmitter and antenna, in dB.

ERP = EIRP - 2.15; where ERP and EIRP are expressed in consistent units.

Note: Please refer to Annex (LTE Chapter 1 Transmitter Radiated Power) for more test data

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## 7. Peak to Average Ratio

### 7.1.1. Limit

FCC § 2.1046 &amp; 24.232(d) &amp; 27.50(d) &amp; 27.50(j) &amp; 27.50(k)

In addition, when the transmitter power is measured in terms of average value, the peak-to-average power ratio (PAPR) of the transmitter shall not exceed 13 dB for more than 0.1% of the time using a signal corresponding to the highest PAPR during periods of continuous transmission.

According to FCC section 24.232(d), power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved average power technique or in compliance with 24.232 (e) of this section. In both instances, equipment employed must be authorized in accordance with the provisions of § 24.51. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

FCC section 24.232(e), peak transmit power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms equivalent voltage. The measurement results shall be properly adjusted for any instrument limitations, such as detector response times, limited resolution bandwidth capability when compared to the emission bandwidth, sensitivity, etc., so as to obtain a true peak measurement for the emission in question over the full bandwidth of the channel.

According to FCC section 27.50(d) (5) & 27.50(j) & 27.50(k), in measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13dB.

### 7.1.2. Test Procedure

Here the lowest, middle and highest channels are selected to perform testing to verify the peak-to-average ratio.

According to KDB 971168 D01, there is CCDF procedure for PAPR:

- a) Refer to instrument's analyzer instruction manual for details on how to use the power statistics/CCDF function;
- b) Set resolution/measurement bandwidth  $\geq$  signal's occupied bandwidth;
- c) Set the number of counts to a value that stabilizes the measured CCDF curve;
- d) Set the measurement interval as follows:
  - 1) for continuous transmissions, set to 1 ms,

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2) for burst transmissions, employ an external trigger that is synchronized with the EUT burst timing sequence, or use the internal burst trigger with a trigger level that allows the burst to stabilize and set the measurement interval to a time that is less than or equal to the burst duration.

e) Record the maximum PAPR level associated with a probability of 0.1%.

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## 7.2. Test Result

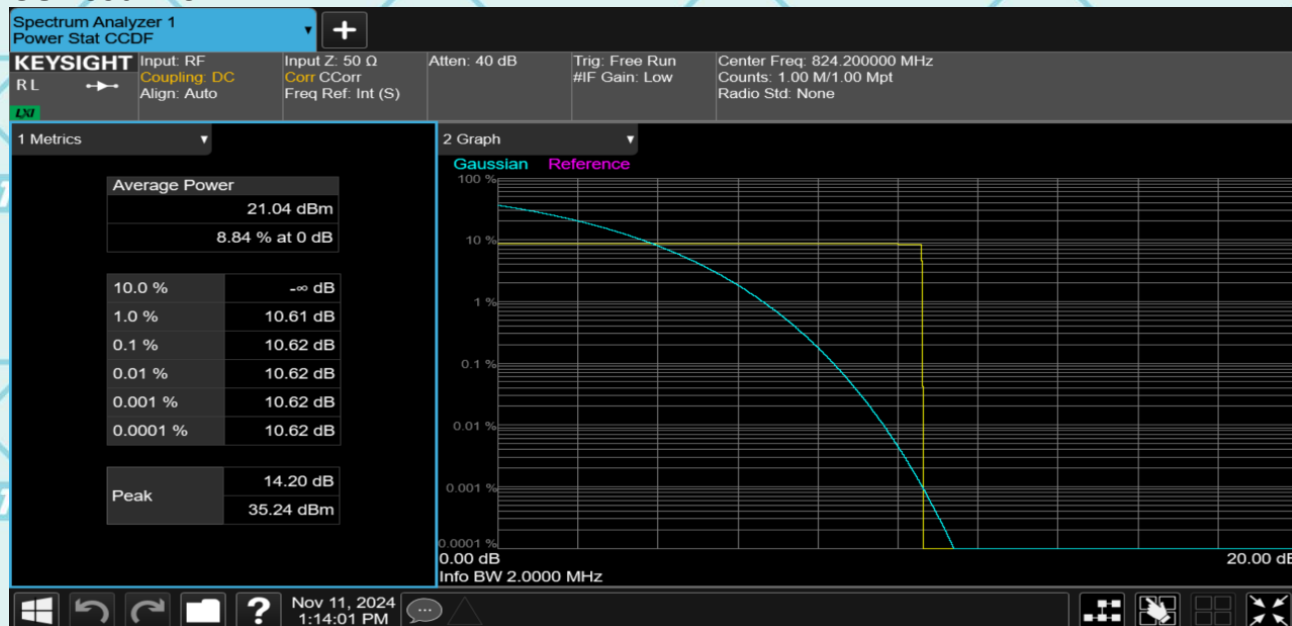
| Band      | Channel | Peak-to-Average Ratio(dB) | Limit(dBm) | Verdict |
|-----------|---------|---------------------------|------------|---------|
| GSM850    | 128     | 10.61                     | 13         | Pass    |
|           | 190     | 9.39                      | 13         | Pass    |
|           | 251     | 9.32                      | 13         | Pass    |
| GPRS850   | 128     | 11.64                     | 13         | Pass    |
|           | 190     | 9.18                      | 13         | Pass    |
|           | 251     | 12.04                     | 13         | Pass    |
| EGPRS850  | 128     | 8.28                      | 13         | Pass    |
|           | 190     | 9.99                      | 13         | Pass    |
|           | 251     | 10.20                     | 13         | Pass    |
| GSM1900   | 512     | 10.74                     | 13         | Pass    |
|           | 661     | 9.10                      | 13         | Pass    |
|           | 810     | 9.55                      | 13         | Pass    |
| GPRS1900  | 512     | 9.42                      | 13         | Pass    |
|           | 661     | 9.14                      | 13         | Pass    |
|           | 810     | 9.90                      | 13         | Pass    |
| EGPRS1900 | 512     | 10.99                     | 13         | Pass    |
|           | 661     | 9.09                      | 13         | Pass    |
|           | 810     | 11.48                     | 13         | Pass    |

| WCDMA Band | Channel | Peak-to-Average Ratio(dB) | Limit(dBm) | Verdict |
|------------|---------|---------------------------|------------|---------|
| Band 2     | 9262    | 3.52                      | 13         | Pass    |
|            | 9400    | 3.53                      | 13         | Pass    |
|            | 9538    | 3.51                      | 13         | Pass    |
| Band 4     | 1312    | 3.48                      | 13         | Pass    |
|            | 1413    | 3.50                      | 13         | Pass    |
|            | 1513    | 3.50                      | 13         | Pass    |
| Band 5     | 4132    | 3.51                      | 13         | Pass    |
|            | 4182    | 3.48                      | 13         | Pass    |
|            | 4233    | 3.50                      | 13         | Pass    |

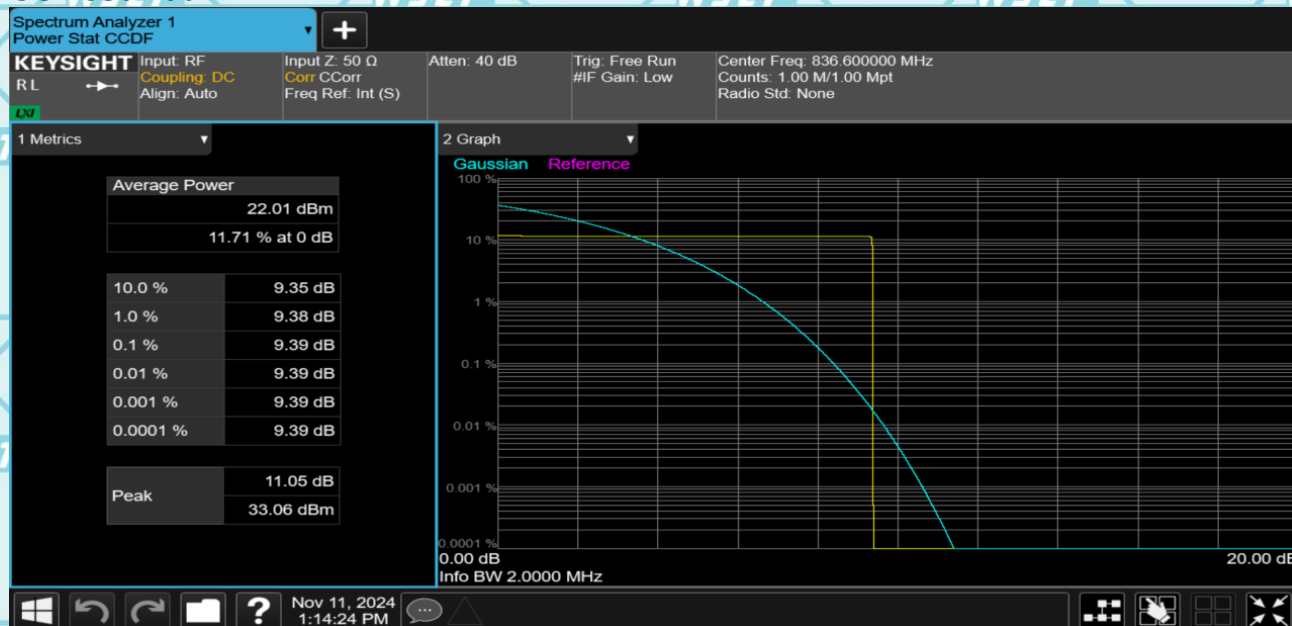
Report No.: WSCT-ANAB-R&E241100056A-RF

## Test diagram

### GSM850 128

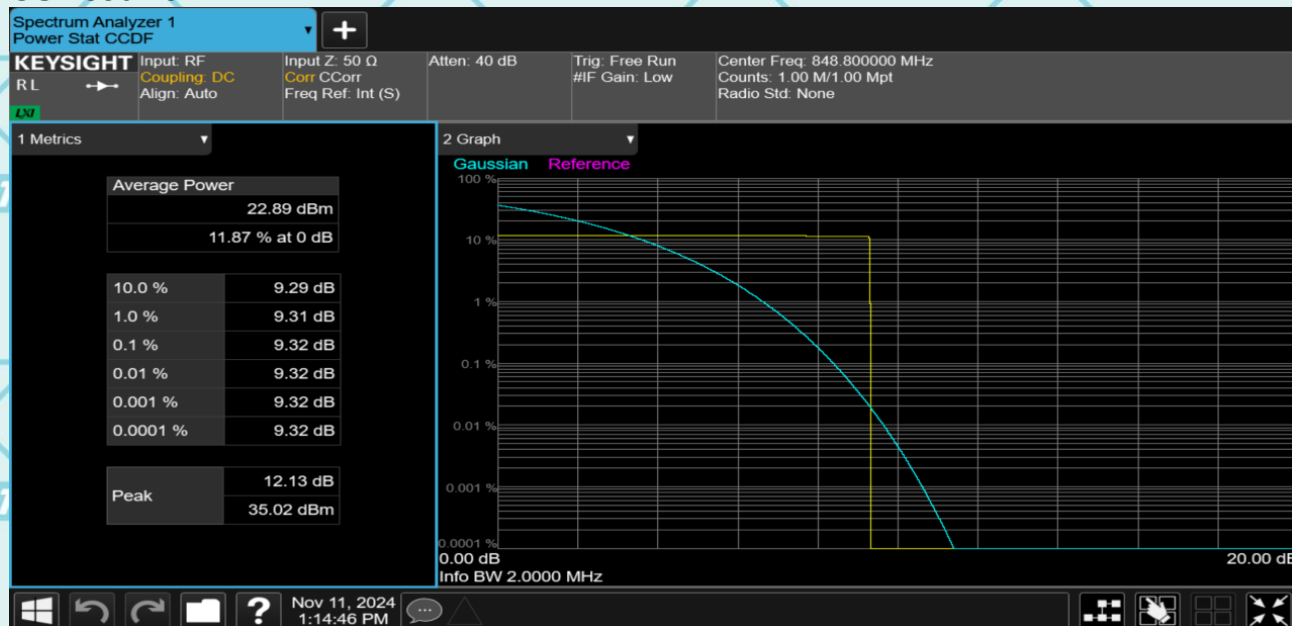


### GSM850 190

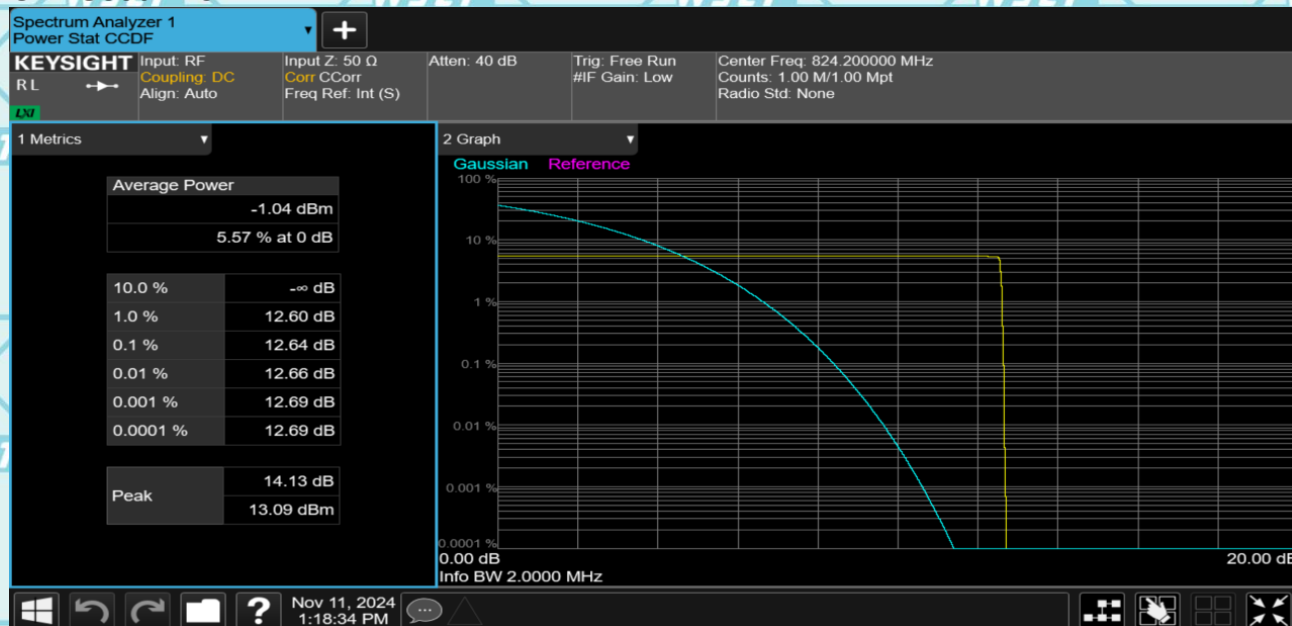


Report No.: WSCT-ANAB-R&E241100056A-RF

## GSM850 251

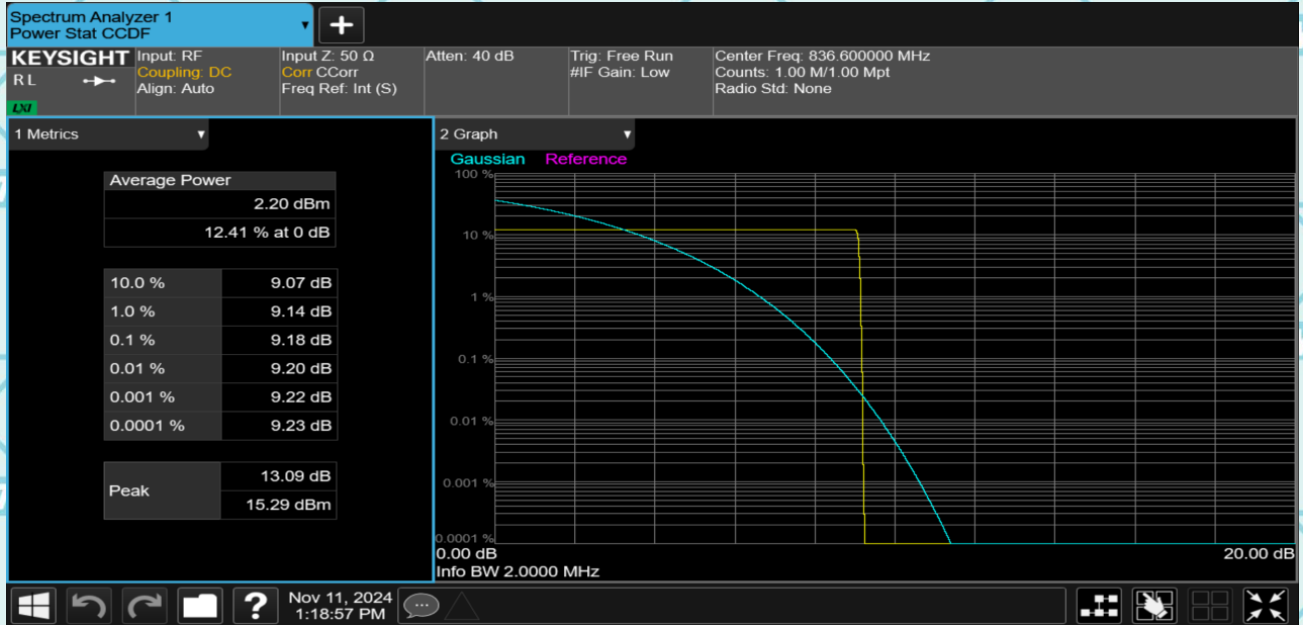


## GPRS850 128



Report No.: WSCT-ANAB-R&E241100056A-RF

### GPRS850 190

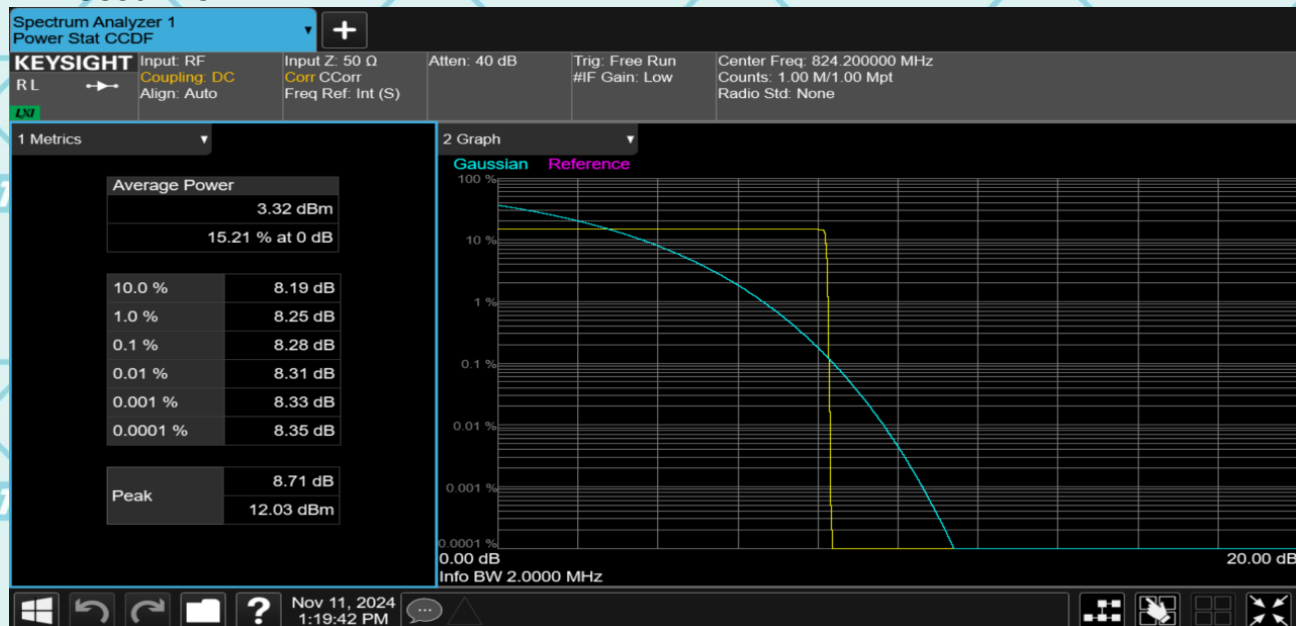


### GPRS850 251

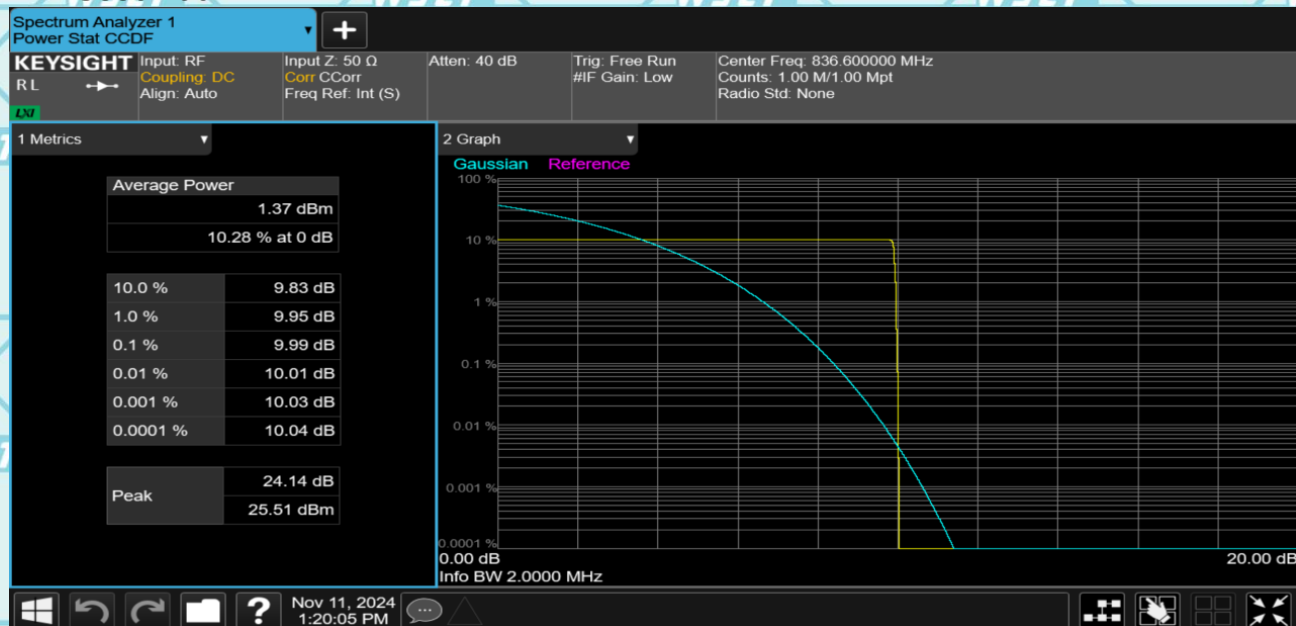


Report No.: WSCT-ANAB-R&E241100056A-RF

## EPRS850 128

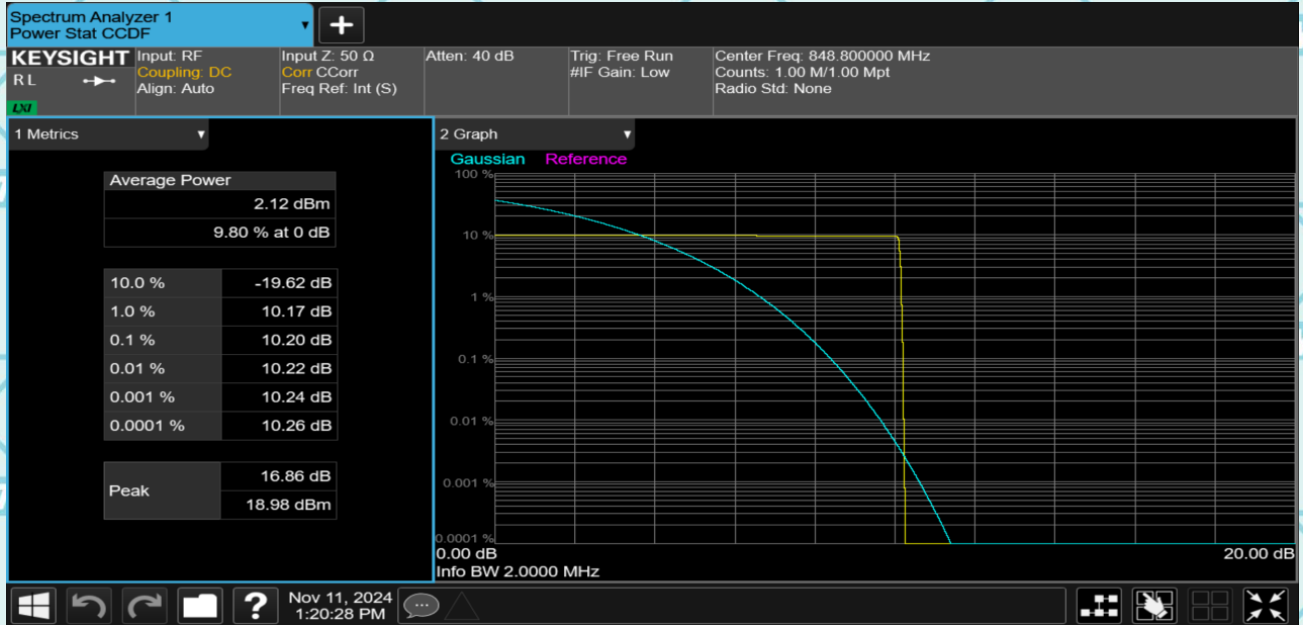


## EPRS850 190

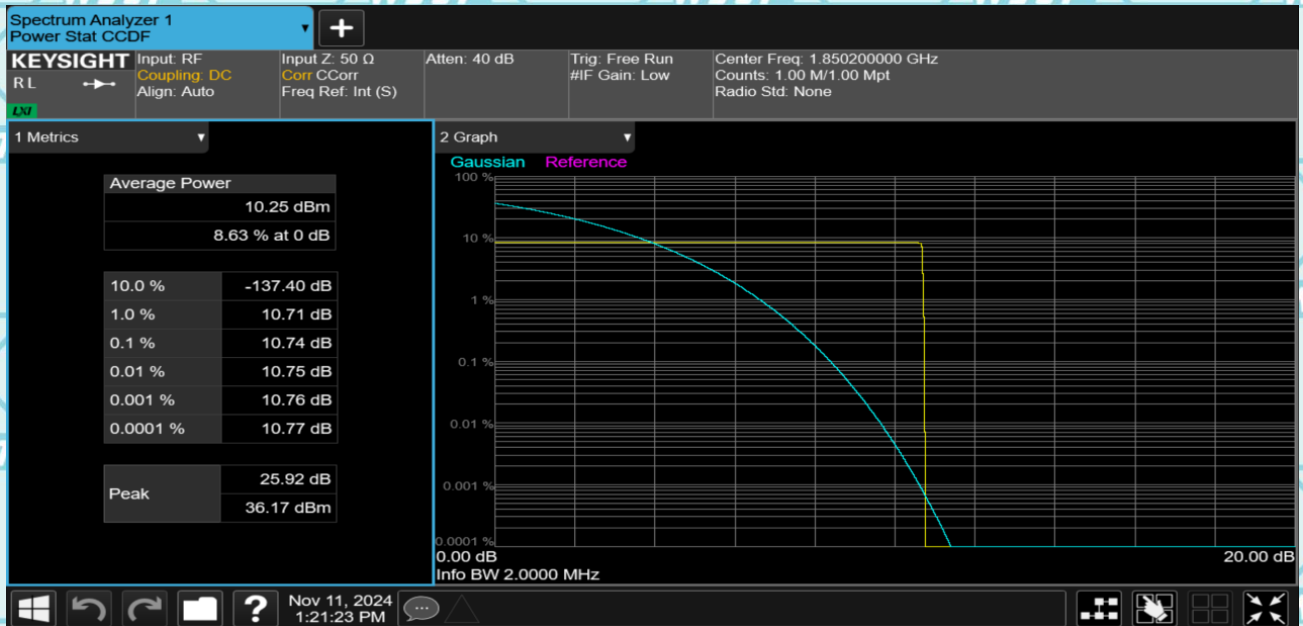


Report No.: WSCT-ANAB-R&E241100056A-RF

## EPRS850 251

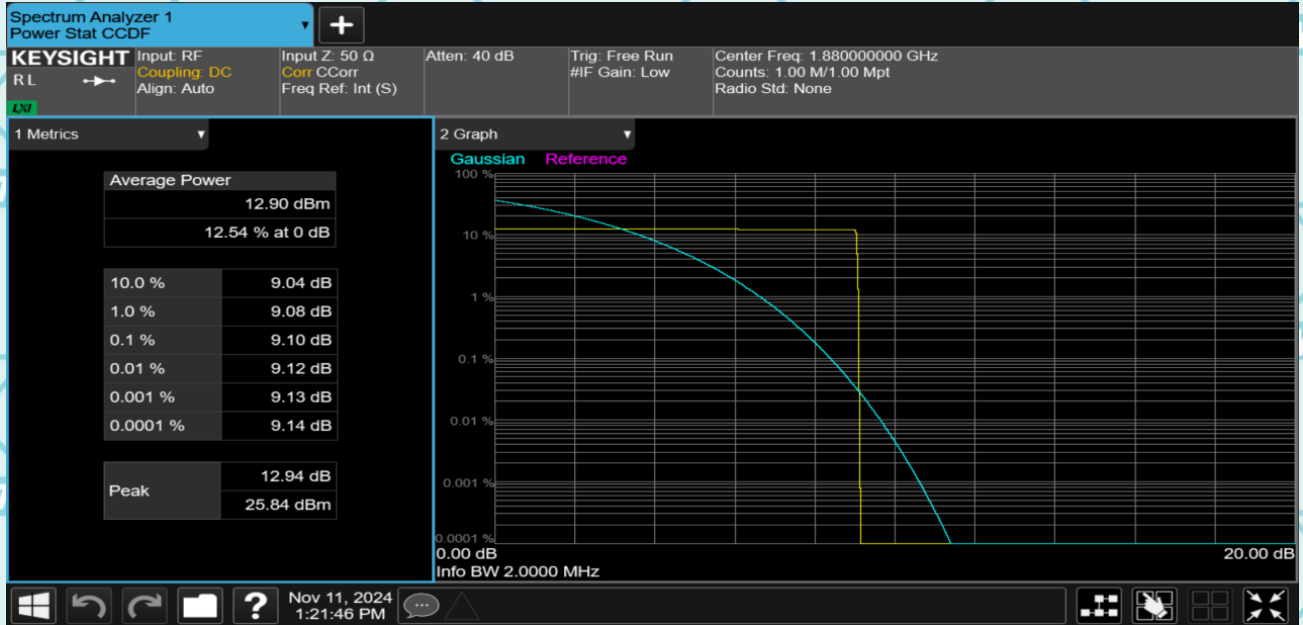


## GSM1900 512

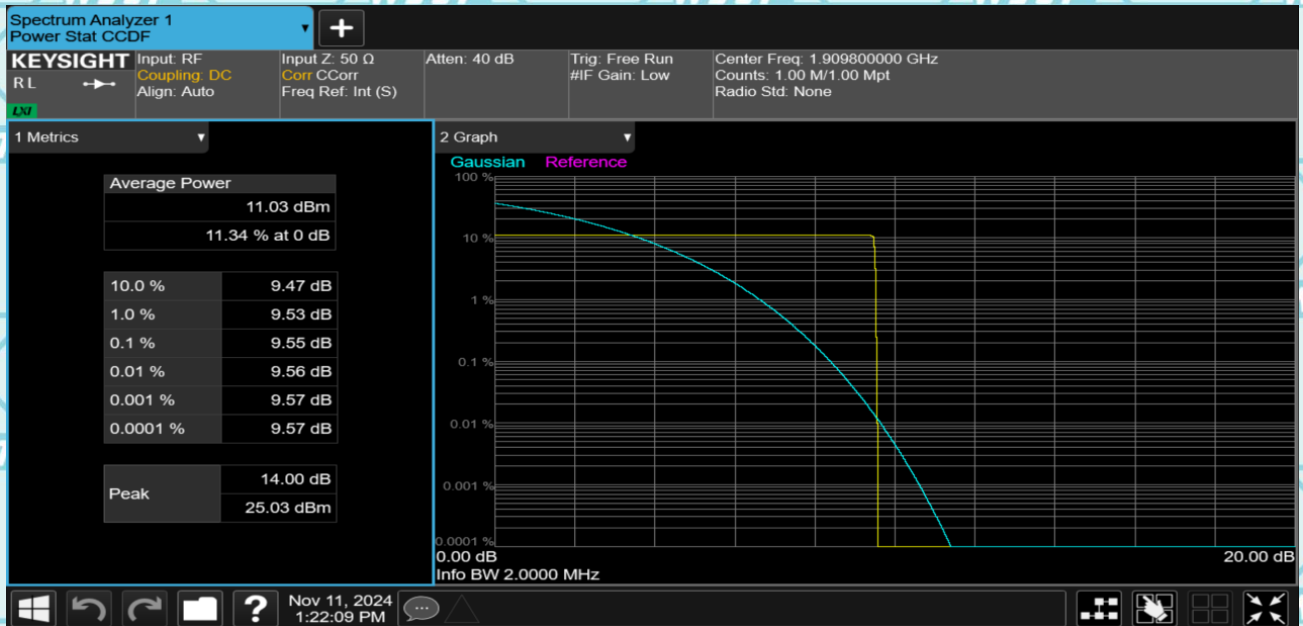


Report No.: WSCT-ANAB-R&E241100056A-RF

### GSM1900 661

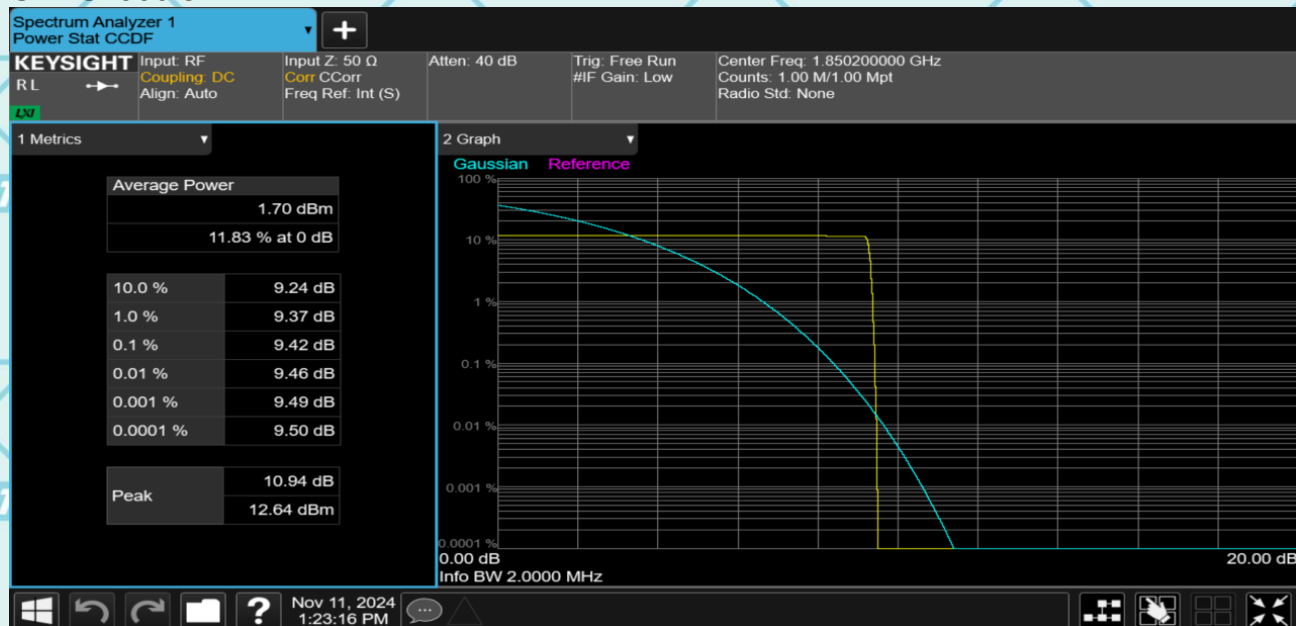


### GSM1900 810

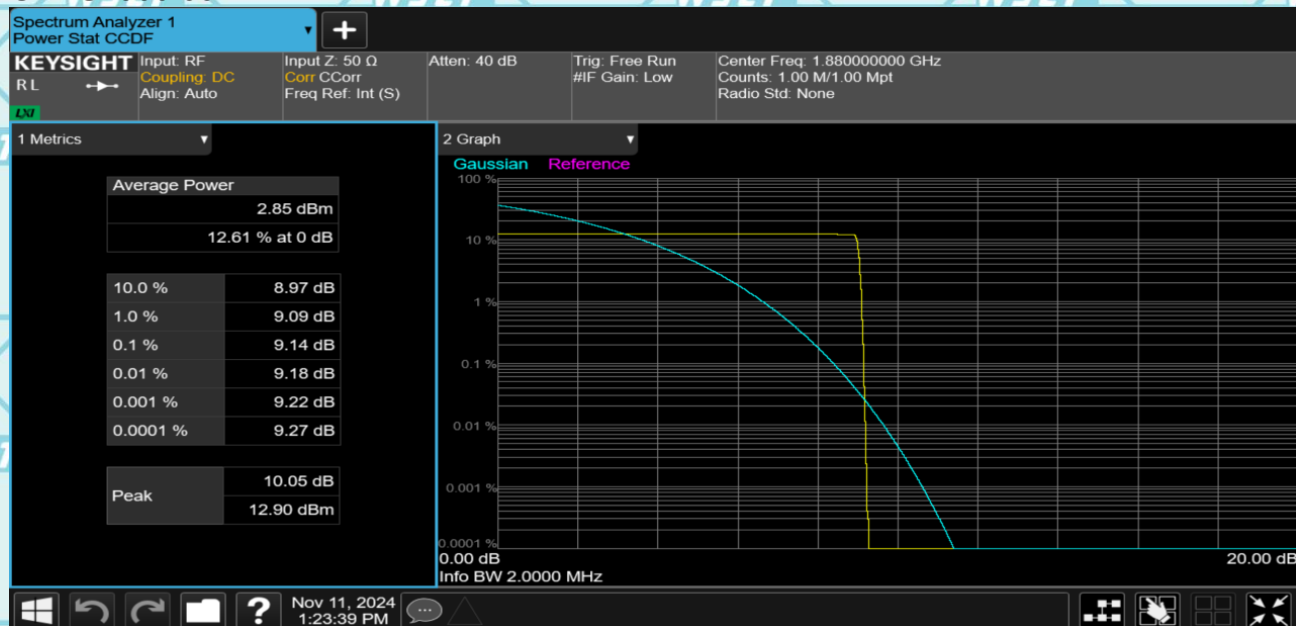


Report No.: WSCT-ANAB-R&E241100056A-RF

## GPRS1900 512

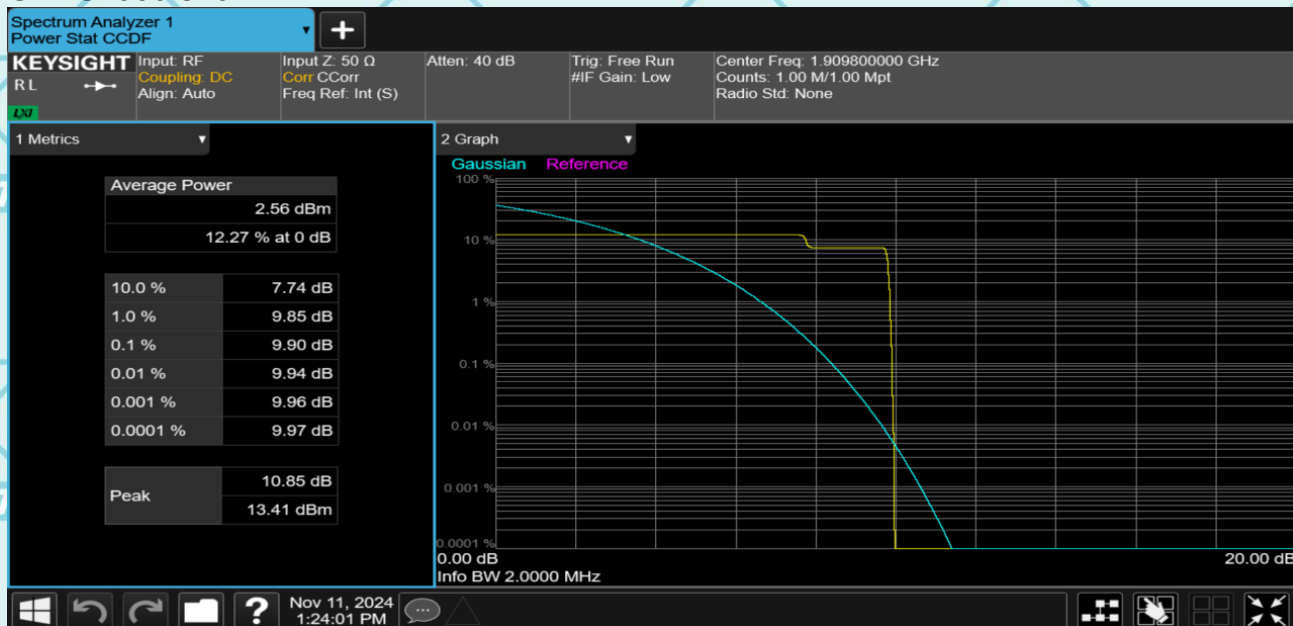


## GPRS1900 661

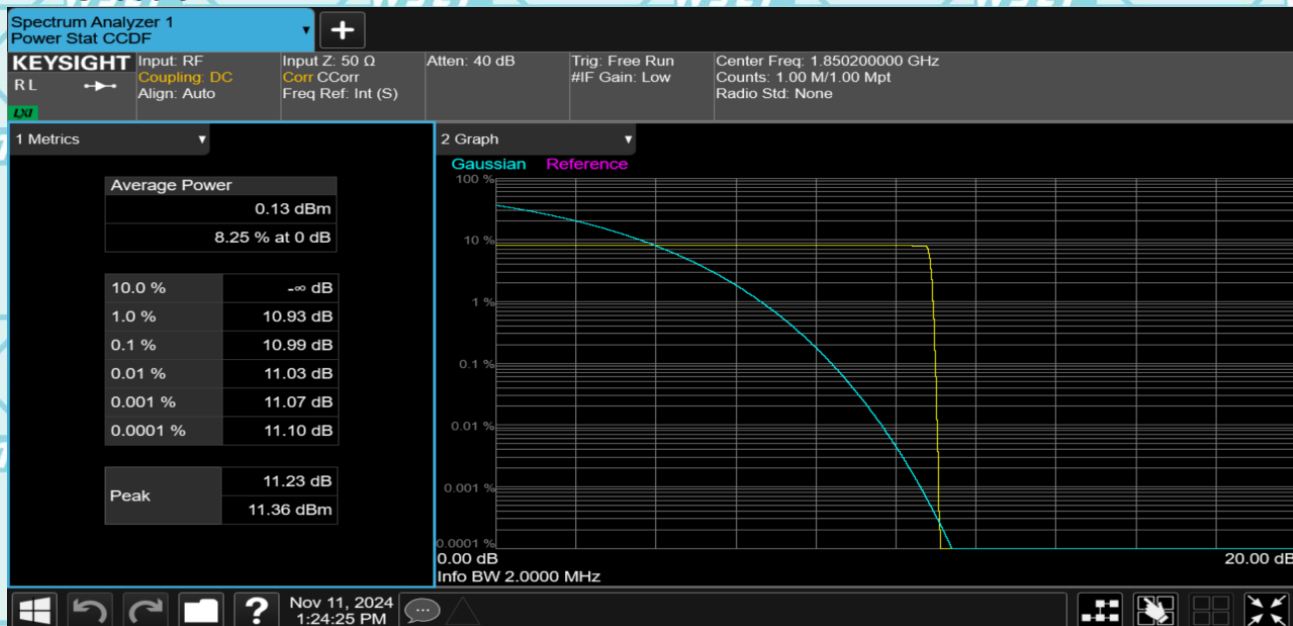


Report No.: WSCT-ANAB-R&E241100056A-RF

## GPRS1900 810

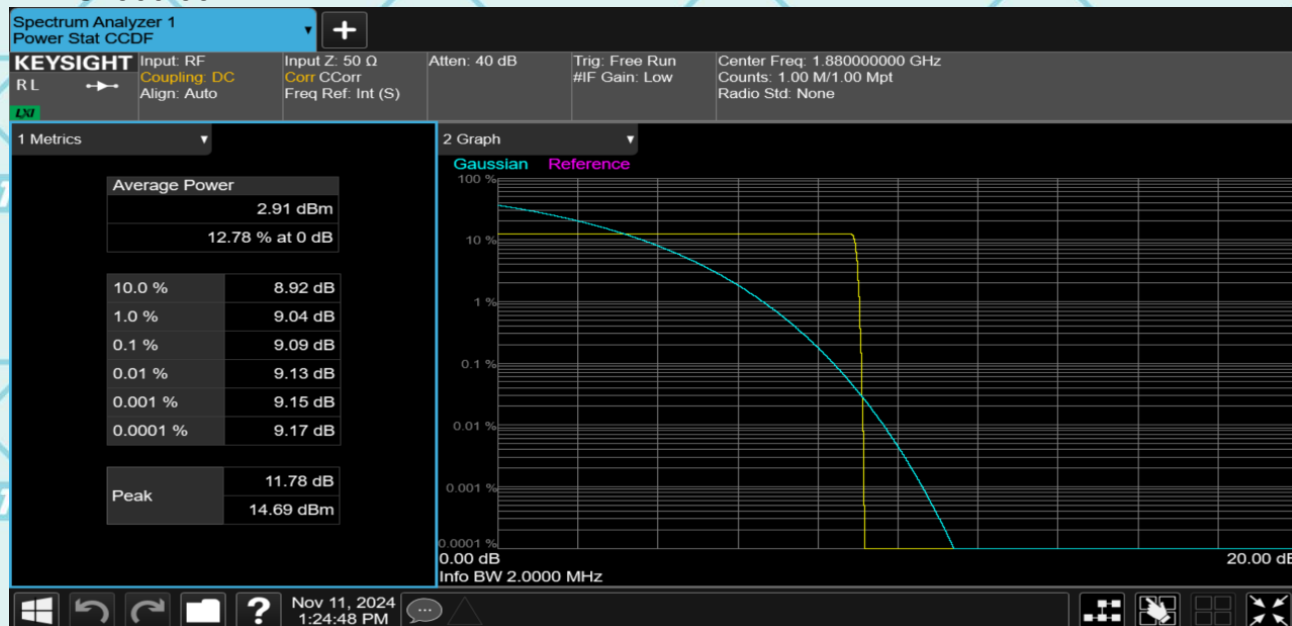


## EPRS1900 512

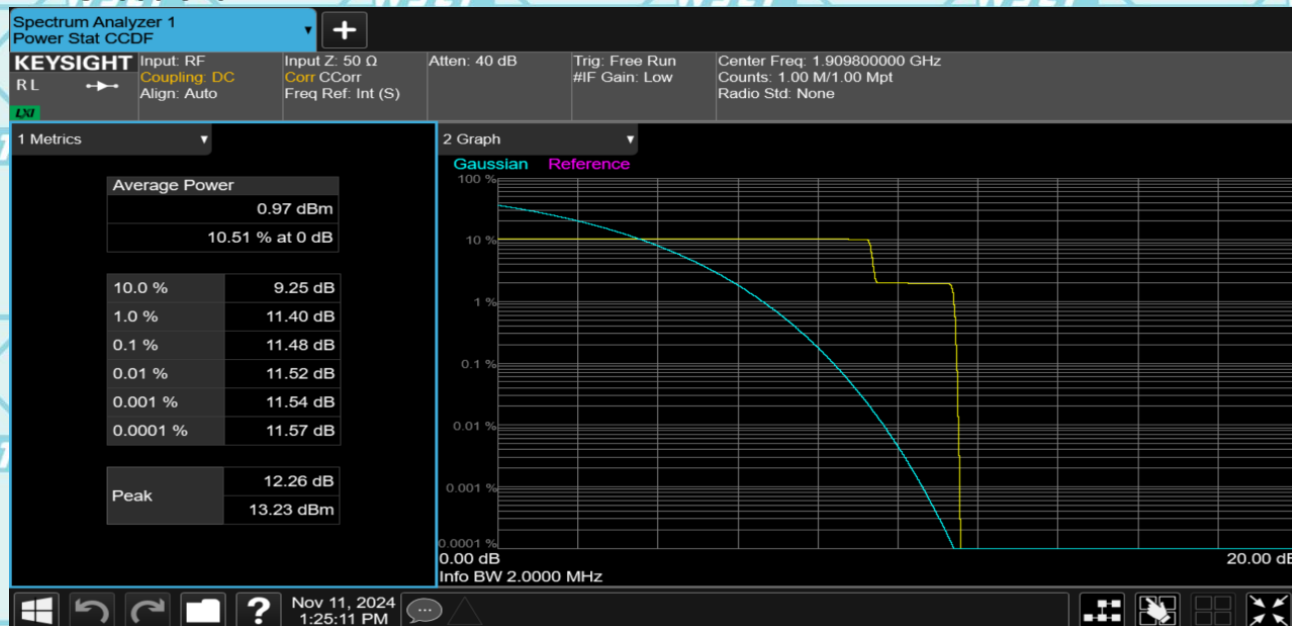


Report No.: WSCT-ANAB-R&E241100056A-RF

## EPRS1900 661

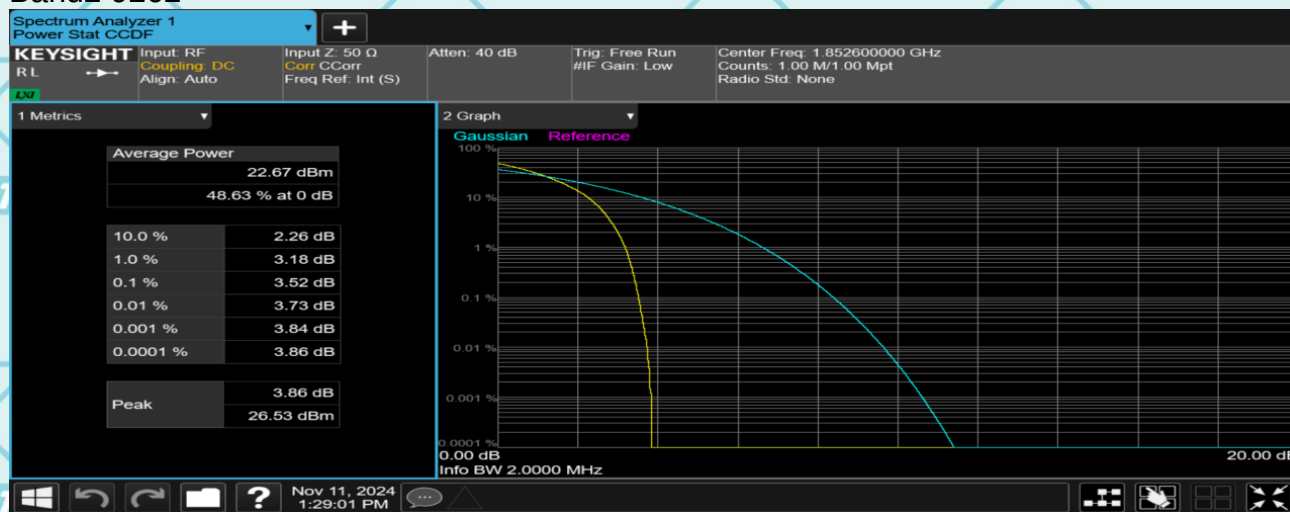


## EPRS1900 810



Report No.: WSCT-ANAB-R&E241100056A-RF

## Band2 9262



## Band2 9400

