Test Report No.: RF260626B001

Certificate # 7607.01

# FCC TEST REPORT

# (PART 22)

| | |
|---|---|
| Applicant: | KYOCERA Corporation |
| Address: | Yokohama Office 2-1-1 Kagahara,Tsuzuki-ku Yokohama-shi,Kanagawa,Japan |

| | |
|---|---|
| Manufacturer or Supplier: | KYOCERA Corporation |
| Address: | Yokohama Office 2-1-1 Kagahara,Tsuzuki-ku Yokohama-shi,Kanagawa,Japan |
| Product: | Mobile Phone |
| Brand Name: | KYOCERA |
| Model Name: | EB1236 |
| FCC ID | JOYEB1236 |
| Date of tests | May. 13, 2026 - Jul. 02, 2026 |

The tests have been carried out according to the requirements of the following standard:

| | |
|---|---|
| ☒ **FCC PART 22, Subpart H**<br>☒ **ANSI/TIA/EIA-603-D**<br>☒ **ANSI/TIA/EIA-603-E** | ☒ **FCC Part 2**<br>☒ **ANSI C63.26-2015** |

CONCLUSION: The submitted sample was found to COMPLY with the test requirement

| Prepared by Carl Xie<br>Engineer / Mobile Department | Approved by Simon Wang<br>Manager / Mobile Department |
|---|---|
| Carl Xie | Simon Wang |
| Date:Jul. 02, 2026 | Date:Jul. 02, 2026 |

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BOOMWAVE TEST (SHENZHEN) CO., LTD.

Room B38, Warehouse A5(Chiwan No.1), No.3 Chiwan 4th Road, Chiwan Community, Zhaoshang Street, Nanshan District, Shenzhen, Guangdong, P.R. CHINA

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# TABLE OF CONTENTS

**RELEASE CONTROL RECORD** ..... **4**
**1 SUMMARY OF TEST RESULTS** ..... **5**
1.1 MEASUREMENT UNCERTAINTY ..... 6
1.2 TEST SITE AND INSTRUMENTS ..... 7
**2 GENERAL INFORMATION** ..... **9**
2.1 GENERAL DESCRIPTION OF EUT ..... 9
2.2 CONFIGURATION OF SYSTEM UNDER TEST ..... 11
2.3 DESCRIPTION OF SUPPORT UNITS ..... 12
2.4 TEST ITEM AND TEST CONFIGURATION ..... 13
2.5 EUT OPERATING CONDITIONS ..... 16
2.6 GENERAL DESCRIPTION OF APPLIED STANDARDS ..... 16
**3 TEST TYPES AND RESULTS** ..... **17**
3.1 OUTPUT POWER MEASUREMENT ..... 17
3.1.1 LIMITS OF OUTPUT POWER MEASUREMENT ..... 17
3.1.2 TEST PROCEDURES ..... 17
3.1.3 TEST SETUP ..... 18
3.1.4 TEST RESULTS ..... 18
3.2 FREQUENCY STABILITY MEASUREMENT ..... 24
3.2.1 LIMITS OF FREQUENCY STABILIITY MEASUREMENT ..... 24
3.2.2 TEST PROCEDURE ..... 24
3.2.3 TEST SETUP ..... 24
3.2.4 TEST RESULTS ..... 24
3.3 OCCUPIED BANDWIDTH MEASUREMENT ..... 25
3.3.1 LIMITS OF OCCUPIED BANDWIDTH MEASUREMENT ..... 25
3.3.2 TEST SETUP ..... 25
3.3.3 TEST PROCEDURES ..... 25
3.3.4 TEST RESULTS ..... 25
3.4 BAND EDGE MEASUREMENT ..... 26
3.4.1 LIMITS OF BAND EDGE MEASUREMENT ..... 26
3.4.2 TEST SETUP ..... 26
3.4.3 TEST PROCEDURES ..... 27
3.4.4 TEST RESULTS ..... 27
3.5 CONDUCTED SPURIOUS EMISSIONS ..... 28
3.5.1 LIMITS OF CONDUCTED SPURIOUS EMISSIONS MEASUREMENT ..... 28
3.5.2 TEST PROCEDURE ..... 28
3.5.3 TEST SETUP ..... 28
3.5.4 TEST RESULTS ..... 28
3.6 RADIATED EMISSION MEASUREMENT ..... 29
3.6.1 LIMITS OF RADIATED EMISSION MEASUREMENT ..... 29
3.6.2 TEST PROCEDURES ..... 29
3.6.3 DEVIATION FROM TEST STANDARD ..... 29
3.6.4 TEST SETUP ..... 30
3.6.5 TEST RESULTS ..... 32
3.7 PEAK TO AVERAGE RATIO ..... 52
3.7.1 LIMITS OF PEAK TO AVERAGE RATIO MEASUREMENT ..... 52
3.7.2 TEST SETUP ..... 52
3.7.3 TEST PROCEDURES ..... 52
3.7.4 TEST RESULTS ..... 53
**4 PHOTOGRAPHS OF THE TEST CONFIGURATION** ..... **54**
**5 INFORMATION ON THE TESTING LABORATORIES** ..... **55**
**6 MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB** ..... **56**
**7 APPENDIX:** ..... **57**
GSM850 ..... 57
PEAK-TO-AVERAGE RATIO(CCDF) ..... 57
TEST RESULT ..... 57
TEST GRAPHS ..... 58

26DB BANDWIDTH AND OCCUPIED BANDWIDTH ..... 59
TEST RESULT ..... 59
TEST GRAPHS ..... 59
BAND EDGE ..... 60
TEST RESULT ..... 60
TEST GRAPHS ..... 60
CONDUCTED SPURIOUS EMISSION ..... 61
TEST RESULT ..... 61
TEST GRAPHS ..... 62
FREQUENCY STABILITY ..... 64
TEST RESULT ..... 64
WCDMA B5 ..... 66
PEAK-TO-AVERAGE RATIO ..... 66
TEST RESULT ..... 66
TEST GRAPHS ..... 66
26DB BANDWIDTH AND OCCUPIED BANDWIDTH ..... 67
TEST RESULT ..... 67
TEST GRAPHS ..... 67
BAND EDGE ..... 68
TEST RESULT ..... 68
TEST GRAPHS ..... 68
CONDUCTED SPURIOUS EMISSION ..... 69
TEST RESULT ..... 69
TEST GRAPHS ..... 70
FREQUENCY STABILITY ..... 72
TEST RESULT ..... 72
LTE B5 ..... 73
PEAK-TO-AVERAGE RATIO(CCDF) ..... 73
TEST RESULT ..... 73
TEST GRAPHS ..... 75
26DB BANDWIDTH AND OCCUPIED BANDWIDTH ..... 88
TEST RESULT ..... 88
TEST GRAPHS ..... 89
BAND EDGE ..... 96
TEST RESULT ..... 96
TEST GRAPHS ..... 98
CONDUCTED SPURIOUS EMISSION ..... 107
TEST RESULT ..... 107
TEST GRAPHS ..... 108
FREQUENCY STABILITY ..... 115
TEST RESULT ..... 115

# RELEASE CONTROL RECORD

| ISSUE NO. | REASON FOR CHANGE | DATE ISSUED |
|---|---|---|
| RF260626B001 | Original release | Jul. 02, 2026 |

# 1 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

| APPLIED STANDARD: FCC Part 22 & Part 2 | | | |
|---|---|---|---|
| **STANDARD SECTION** | **TEST TYPE** | **RESULT** | **Test lab*** |
| §2.1046 | Conducted Output Power | Compliance | A |
| §22.913 (a)(5) | Effective Radiated Power | Compliance | A |
| §2.1055<br>§22.355 | Frequency Stability | Compliance | A |
| §2.1049 | Occupied Bandwidth | Compliance | A |
| §22.913 (d) | Peak to average ratio* | Compliance | A |
| §2.1051<br>§22.917(a) | Band Edge Measurements | Compliance | A |
| §2.1051<br>§22.917(a) | Conducted Spurious Emissions | Compliance | A |
| §2.1053<br>§22.917(a) | Radiated Spurious Emissions | Compliance | A |

* Refer to KDB 971168 D01 Power Meas License Digital Systems v03r01.

***Test Lab Information Reference**

**Lab A:**

BOOMWAVE TEST (SHENZHEN) CO., LTD.

**Lab Address:**

Room B38, Warehouse A5(Chiwan No.1), No.3 Chiwan 4th Road, Chiwan Community, Zhaoshang Street, Nanshan District, Shenzhen, Guangdong, P.R. CHINA

**Accredited Test Lab Cert 7607.01**

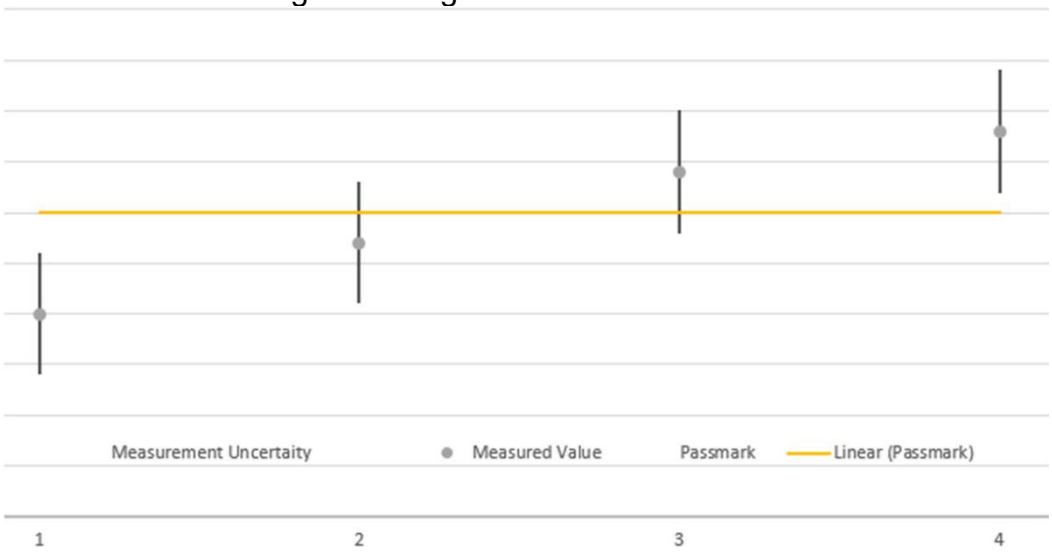
The FCC Site Registration No. is 646781; The Designation No. is CN1429.

## 1.1 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

| MEASUREMENT | UNCERTAINTY |
|---|---|
| Maximum Peak Output Power | ±2.06dB |
| Frequency Stability | ±76.97Hz |
| Radiated emissions (9KHz~30MHz) | ±2.68dB |
| Radiated emissions (30MHz~1GHz) | ±4.98dB |
| Radiated emissions (1GHz ~6GHz) | ±4.70dB |
| Radiated emissions (6GHz ~18GHz) | ±4.60dB |
| Radiated emissions (18GHz ~40GHz) | ±4.12dB |
| Conducted emissions | ±4.01dB |
| Occupied Channel Bandwidth | ±43.58KHz |
| Band Edge Measurements | ±4.70dB |
| Peak to average ratio | ±0.76dB |

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.




The verdicts in this test report are given according the above diagram:

| Case | Measured Value | Uncertainty Range | Verdict |
|---|---|---|---|
| 1 | below pass mark | below pass mark | Passed |
| 2 | below pass mark | within pass mark | Passed |
| 3 | above pass mark | within pass mark | Failed |
| 4 | above pass mark | above pass mark | Failed |

That means, the laboratory applies, as decision rule (see ISO/IEC 17025:2017), the so-called shared risk principle.

## 1.2 TEST SITE AND INSTRUMENTS

| Equipment | Manufacturer | Model No. | Serial No. | Last Cal. | Next Cal. |
|---|---|---|---|---|---|
| 3m Semi-anechoic Chamber | ETS-LINDGREN | 9m*6m*6m | Euroshieldpn-CT0001143-1216 | 2025/7/3 | 2027/7/2 |
| BiConiLog Antenna | ETS-LINDGREN | 3143B | 161965 | 2025/7/17 | 2027/7/16 |
| Horn Antenna | SCHWARZBECK | BBHA9120D | 3297 | 2025/9/27 | 2027/9/26 |
| Horn Antenna | STEATITE | QWH-SL-18-40-K-SG QMS-00361 | 15433 | 2025/7/19 | 2027/7/18 |
| Preamplifier | Tonscend | TPA184045 | AP24L8060388 | 2025/7/3 | 2027/7/2 |
| MXE EMI Receiver | keysight | N9038B | MY50018017 | 2025/7/1 | 2027/6/30 |
| MXG Vector Signal Generator | Keysight | N5183B | MY59100137 | 2025/6/30 | 2027/6/29 |
| Preamplifier | Tonscend | TPA001330 | 806JSAPO40804251015 | 2025/6/30 | 2027/6/29 |
| Preamplifier | Tonscend | TPA011845 | AP24L8060392 | 2025/6/30 | 2027/6/29 |
| Attenuator 6DB | SHX | TS2-6-6-A | 230927166 | 2025/6/30 | 2027/6/29 |
| Attenuator 6DB | SHX | TS2-6-6-A | 230927165 | 2025/6/30 | 2027/6/29 |
| Active Receive Loop Antenna | SCHWARZBECK | FMZB 1519 B | 00173 | 2025/6/30 | 2027/6/29 |
| Temp. & Humi. Recorder | Kejian | HTC-01 | 157246 | 2025/7/2 | 2027/7/1 |
| HIGH pass FILTER_1-18 | EWT | EWT-57-0222 | EWT-57-0222 | 2025/6/30 | 2027/6/29 |
| HIGH pass FILTER_7-18 | EWT | EWT-57-0223 | EWT-57-0223 | 2025/6/30 | 2027/6/29 |
| HIGH pass FILTER_3-18 | EWT | EWT-57-0221 | EWT-57-0221 | 2025/6/30 | 2027/6/29 |
| DC~1GHz Lowpass Filter | EWT | EWT-56-0649 | EWT-56-0649 | 2025/7/3 | 2027/7/2 |
| Cable 1 | N/A | N/A | N/A | 2025/9/28 | 2027/9/27 |
| Cable 2 | N/A | N/A | N/A | 2025/9/28 | 2027/9/27 |
| Cable 3 | N/A | N/A | N/A | 2025/9/28 | 2027/9/27 |
| Wireless communication integrated tester | Rohde&Schwarz | CMW500 | 182016 | 2025/6/30 | 2027/6/29 |
| EXA Signal Analyzer | KEYSIGHT | N9010B | MY62170156 | 2025/6/30 | 2027/6/29 |
| RF Control Unit | Tonscend | JS0806-1 | 21K8060504 | 2025/6/16 | 2027/6/15 |
| DC Power Supply | AGILENT | HMP2020 | 100598 | 2025/7/1 | 2027/6/30 |
| 10dB attenuator | JFW INDUSTRIES INC | 50HF-010-SMA | 50HF-010-SMA-1 | 2025/6/30 | 2027/6/29 |
| 10dB attenuator | JFW INDUSTRIES INC | 50HF-010-SMA | 50HF-010-SMA-2 | 2025/6/30 | 2027/6/29 |
| hygrothermograph | Anymetrers | ---- | TH101B | 2025/7/22 | 2027/7/21 |
| Temperature Box | zhongkemeiqi | MA22040172 | MQ-DTH50F-2 | 2025/7/1 | 2027/6/30 |
| power divider | WOKEN | 71688 | 204-003180-01 | 2025/6/30 | 2027/6/29 |

**NOTE:**

1. The calibration interval of the above test instruments is 24 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
2. The test was performed in 3m Semi-anechoic Chamber and RF Oven Room.
3. The horn antenna is used only for the measurement of emission frequency above 1GHz if tested.
4. The FCC Site Registration No. is 646781; The Designation No. is CN1429.

# 2 GENERAL INFORMATION

## 2.1 GENERAL DESCRIPTION OF EUT

| | | |
|---|---|---|
| **PRODUCT** | Mobile Phone | |
| **BRAND NAME** | KYOCERA | |
| **MODEL NAME** | EB1236 | |
| **NOMINAL VOLTAGE** | 3.89Vdc | |
| **MODULATION TYPE** | **GSM** | GMSK |
| | **WCDMA** | QPSK,16QAM |
| | **LTE** | QPSK, 16QAM, 64QAM |
| **FREQUENCY RANGE** | **GSM** | 824.2MHz ~ 848.8MHz |
| | **WCDMA** | 826.4MHz ~ 846.6MHz |
| | **LTE Band 5 (Channel Bandwidth: 1.4MHz)** | 824.7MHz ~ 848.3MHz |
| | **LTE Band 5 (Channel Bandwidth: 3MHz)** | 825.5MHz ~ 847.5MHz |
| | **LTE Band 5 (Channel Bandwidth: 5MHz)** | 826.5MHz ~ 846.5MHz |
| | **LTE Band 5 (Channel Bandwidth: 10MHz)** | 829MHz ~ 844MHz |
| **MAX. ERP POWER** | **GSM850** | 885.12mW |
| | **WCDMA B5** | 168.27mW |
| | **LTE Band 5 (Channel Bandwidth: 1.4MHz)** | 91.20mW |
| | **LTE Band 5 (Channel Bandwidth: 3MHz)** | 88.92mW |
| | **LTE Band 5 (Channel Bandwidth: 5MHz)** | 90.57mW |
| | **LTE Band 5 (Channel Bandwidth: 10MHz)** | 91.41mW |
| **EMISSION DESIGNATORGOGN** | **GSM850** | 246KGXW |
| | **WCDMA B5** | 4M14F9W |
| | **LTE Band 5 (Channel Bandwidth: 1.4MHz)** | QPSK: 1M11G7D |
| | | 16QAM: 1M11W7D |
| | | 64QAM: 1M10W7D |
| | **LTE Band 5 (Channel Bandwidth: 3MHz)** | QPSK: 2M71G7D |
| | | 16QAM: 2M72W7D |
| | | 64QAM: 2M71W7D |
| | **LTE Band 5 (Channel Bandwidth: 5MHz)** | QPSK: 4M53G7D |
| | | 16QAM: 4M53W7D |
| | | 64QAM: 4M53W7D |
| | **LTE Band 5** | QPSK: 9M03G7D |

| | | |
|---|---|---|
| | **(Channel Bandwidth: 10MHz)** | 16QAM: 9M00W7D |
| | | 64QAM: 9M00W7D |
| **ANTENNA GAIN** | ☒Provided by client | |
| | GSM850 | -1.8dBi |
| | WCDMA V | -1.8dBi |
| | LTE B5 | -1.8dBi |
| **ANTENNA TYPE** | Monopole | |
| **HW VERSION** | DMT2 | |
| **SW VERSION** | V0.252EX.0052.a | |
| **I/O PORTS** | Refer to user's manual | |
| **CABLE SUPPLIED** | N/A | |
| **EXTREME TEMPERATURE** | -20℃-60℃ | |
| **EXTREME VOLTAGE** | 3.501V-4.279V | |

**NOTE**:

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
2. The EUT incorporates a SISO function. Physically, the EUT provides one completed transmitter and one/two receivers.

| MODULATION MODE | TX FUNCTION |
|---|---|
| **GSM** | 1TX/1RX |
| **WCDMA** | 1TX/2RX |
| **LTE** | 1TX/2RX |

3. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in the test report.
4. According to the Statement of differences provided by the applicant, the procurement of memory from multiple suppliers. EB1236 source MCP(ROM and RAM) from two different vendors each and use them interchangeably. MCP is procured from Micron and Samsung.

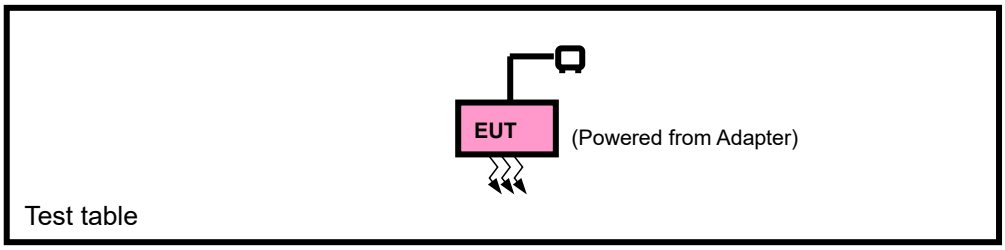
   MCP(ROM and RAM)

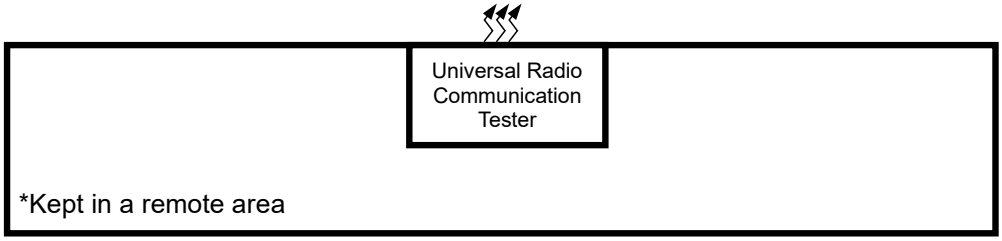
   Micron: MT30AZZZCD94TKXL-023 W.237

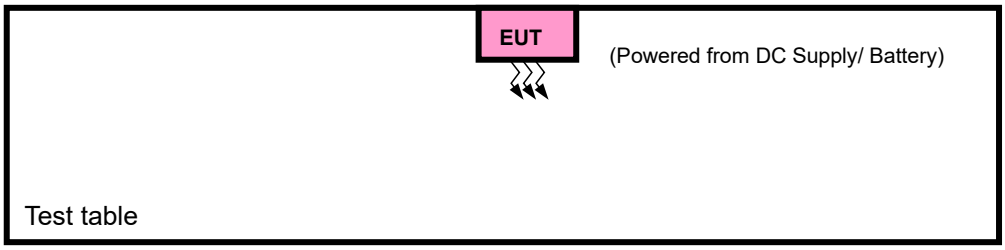
   Samsung: KM9YC001XM-B627

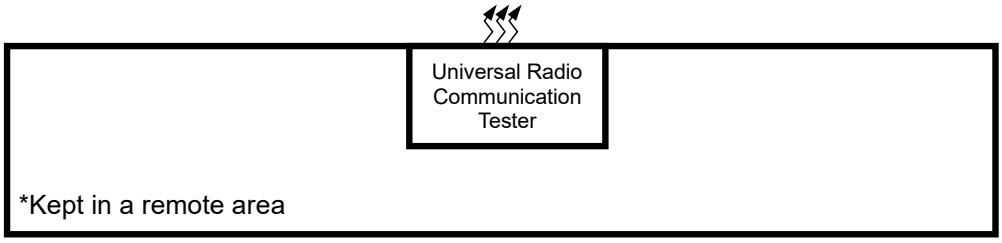
## 2.2 CONFIGURATION OF SYSTEM UNDER TEST

**FOR RADIATION EMISSION**



## 2.3 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

| NO. | PRODUCT | BRAND | MODEL NO. | SERIAL NO. | FCC ID |
|---|---|---|---|---|---|
| 1 | Laptop | Lenovo | ThinkPad E14 | HRSW00024 | N/A |
| 2 | Adapter | Juniper | MK-P301EXC | N/A | N/A |
| 3 | Earphone | Xiaomi | N/A | N/A | N/A |

| NO. | SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS |
|---|---|
| 1 | USB Line: Shielded, Detachable 1m; |

## 2.4 TEST ITEM AND TEST CONFIGURATION

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis and antenna ports.The worst case in ERP and radiated emission was found when positioned on X-plane for GSM /EDGE /WCDMA /LTE. Following channel(s) was (were) selected for the final test as listed below:

| EUT CONFIGURE MODE | DESCRIPTION |
|---|---|
| A | EUT + Adapter with GSM or WCDMA or LTE link |
| B | EUT + DC Supply with GSM or WCDMA or LTE link |

**GSM MODE**

| EUT CONFIGURE MODE | TEST ITEM | Available Channel | Tested Channel | MODE |
|---|---|---|---|---|
| A | ERP | 128 to 251 | 128, 189, 251 | GSM,EDGE |
| B | FREQUENCY STABILITY | 128 to 251 | 128, 189, 251 | GSM,EDGE |
| A | OCCUPIED BANDWIDTH | 128 to 251 | 128, 189, 251 | GSM,EDGE |
| A | BAND EDGE | 128 to 251 | 128, 251 | GSM,EDGE |
| A | CONDUCTED EMISSION | 128 to 251 | 128, 189, 251 | GSM,EDGE |
| A | RADIATED EMISSION | 128 to 251 | 128, 189, 251 | GSM,EDGE |
| A | PEAK TO AVERAGE RATIO | 128 to 251 | 128, 189, 251 | GSM,EDGE |

**WCDMA MODE**

| EUT CONFIGURE MODE | TEST ITEM | AVAILABLE CHANNEL | TESTED CHANNEL | MODE |
|---|---|---|---|---|
| A | ERP | 4132 to 4233 | 4132, 4182, 4233 | WCDMA |
| B | FREQUENCY STABILITY | 4132 to 4233 | 4132, 4182, 4233 | WCDMA |
| A | OCCUPIED BANDWIDTH | 4132 to 4233 | 4132, 4182, 4233 | WCDMA |
| A | BAND EDGE | 4132 to 4233 | 4132, 4233 | WCDMA |
| A | CONDCUDETED EMISSION | 4132 to 4233 | 4132, 4182, 4233 | WCDMA |
| A | RADIATED EMISSION | 4132 to 4233 | 4132, 4182, 4233 | WCDMA |
| A | PEAK TO AVERAGE RATIO | 4132 to 4233 | 4132, 4182, 4233 | WCDMA |

## LTE BAND 5 MODE

| EUT CONFIGURE MODE | TEST ITEM | Available Channel | Tested Channel | Channel bandwidth | modulation | mode |
|---|---|---|---|---|---|---|
| A | ERP | 20407 to 20643 | 20407, 20525, 20643 | 1.4MHz | QPSK,16QAM,64QAM | 1 RB / 0 RB Offset |
| | | 20415 to 20635 | 20415, 20525, 20635 | 3MHz | QPSK,16QAM,64QAM | 1 RB / 0 RB Offset |
| | | 20425 to 20625 | 20425, 20525, 20625 | 5MHz | QPSK,16QAM,64QAM | 1 RB / 0 RB Offset |
| | | 20450 to 20600 | 20450, 20525, 20600 | 10MHz | QPSK,16QAM,64QAM | 1 RB / 0 RB Offset |
| B | FREQUENCY STABILITY | 20450 to 20600 | 20450, 20600 | 10MHz | QPSK,16QAM,64QAM | Full RB / 0 RB Offset |
| A | OCCUPIED BANDWIDTH | 20407 to 20643 | 20407, 20525, 20643 | 1.4MHz | QPSK,16QAM,64QAM | Full RB / 0 RB Offset |
| | | 20415 to 20635 | 20415, 20525, 20635 | 3MHz | QPSK,16QAM,64QAM | Full RB / 0 RB Offset |
| | | 20425 to 20625 | 20425, 20525, 20625 | 5MHz | QPSK,16QAM,64QAM | Full RB / 0 RB Offset |
| | | 20450 to 20600 | 20450, 20525, 20600 | 10MHz | QPSK,16QAM,64QAM | Full RB / 0 RB Offset |
| A | BAND EDGE | 20407 to 20643 | 20407 | 1.4 MHz | QPSK,16QAM,64QAM | 1 RB / 0 RB Offset |
| | | | | | | Full RB / 0 RB Offset |
| | | 20407 to 20643 | 20643 | 1.4 MHz | QPSK,16QAM,64QAM | 1 RB / 5 RB Offset |
| | | | | | | Full RB / 0 RB Offset |
| | | 20415 to 20635 | 20415 | 3 MHz | QPSK,16QAM,64QAM | 1 RB / 0 RB Offset |
| | | | | | | Full RB / 0 RB Offset |
| | | 20415 to 20635 | 20635 | 3 MHz | QPSK,16QAM,64QAM | 1 RB / 14 RB Offset |
| | | | | | | Full RB / 0 RB Offset |
| | | 20425 to 20625 | 20425 | 5MHz | QPSK,16QAM,64QAM | 1 RB / 0 RB Offset |
| | | | | | | Full RB / 0 RB Offset |
| | | 20425 to 20625 | 20625 | 5MHz | QPSK,16QAM,64QAM | 1 RB / 24 RB Offset |
| | | | | | | Full RB / 0 RB Offset |
| | | 20450 to 20600 | 20450 | 10MHz | QPSK,16QAM,64QAM | 1 RB / 0 RB Offset |
| | | | | | | Full RB / 0 RB Offset |
| | | 20450 to 20600 | 20600 | 10MHz | QPSK,16QAM,64QAM | 1 RB / 49 RB Offset |
| | | | | | | Full RB / 0 RB Offset |
| A | CONDCUDETED EMISSION | 20407 to 20643 | 20407, 20525, 20643 | 1.4MHz | QPSK | 1 RB / 0 RB Offset |
| | | 20415 to 20635 | 20415, 20525, 20635 | 3MHz | QPSK | 1 RB / 0 RB Offset |
| | | 20425 to 20625 | 20425, 20525, 20625 | 5MHz | QPSK | 1 RB / 0 RB Offset |
| | | 20450 to 20600 | 20450, 20525, 20600 | 10MHz | QPSK | 1 RB / 0 RB Offset |

| | | | | | | |
|---|---|---|---|---|---|---|
| A | RADIATED EMISSION | 20450 to 20600 | 20450, 20525, 20600 | 10MHz | QPSK | 1 RB / 0 RB Offset |
| A | PEAK TO AVERAGE RATIO | 20407 to 20643 | 20407, 20525, 20643 | 1.4MHz | QPSK,16QAM,64QAM | 1 RB / 0 RB Offset<br>Full RB / 0 RB Offset |
| | | 20415 to 20635 | 20415, 20525, 20635 | 3MHz | QPSK,16QAM,64QAM | 1 RB / 0 RB Offset<br>Full RB / 0 RB Offset |
| | | 20425 to 20625 | 20425, 20525, 20625 | 5MHz | QPSK,16QAM,64QAM | 1 RB / 0 RB Offset<br>Full RB / 0 RB Offset |
| | | 20450 to 20600 | 20450, 20525, 20600 | 10MHz | QPSK,16QAM,64QAM | 1 RB / 0 RB Offset<br>Full RB / 0 RB Offset |

**Note:** 1. This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.

| TEST CONDITION | | | |
|---|---|---|---|
| **TEST ITEM** | **ENVIRONMENTAL CONDITIONS** | **INPUT POWER** | **TESTED BY** |
| ERP | 23deg. C, 70%RH | DC 3.89V By Battery | Carl Xie |
| FREQUENCY STABILITY | 23deg. C, 70%RH | DC 3.89V By Battery | Alan Yu |
| OCCUPIED BANDWIDTH | 23deg. C, 70%RH | DC 3.89V By Battery | Alan Yu |
| BAND EDGE | 23deg. C, 70%RH | DC 3.89V By Battery | Alan Yu |
| CONDCUDETED EMISSION | 23deg. C, 70%RH | DC 3.89V By Battery | Alan Yu |
| RADIATED EMISSION | 23deg. C, 70%RH | DC 3.89V By Battery | Carl Xie |
| PEAK TO AVERAGE RATIO | 23deg. C, 70%RH | DC 3.89V By Battery | Alan Yu |

## 2.5 EUT OPERATING CONDITIONS

The EUT makes a call to the communication simulator. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency

## 2.6 GENERAL DESCRIPTION OF APPLIED STANDARDS

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

**FCC 47 CFR Part 2**

**FCC 47 CFR Part 22**

**KDB 971168 D01 Power Meas License Digital Systems v03r01**

**ANSI/TIA/EIA-603-D**

**ANSI/TIA/EIA-603-E**

**ANSI C63.26-2015**

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

# 3 TEST TYPES AND RESULTS

## 3.1 OUTPUT POWER MEASUREMENT

### 3.1.1 LIMITS OF OUTPUT POWER MEASUREMENT

Mobile / Portable station are limited to 7 watts e.r.p.

### 3.1.2 TEST PROCEDURES

**EIRP / ERP MEASUREMENT:**

Per KDB 971168 D01 Power Meas License Digital Systems v03r01 or subclause 5.2.5.5 of ANSI C63.26-2015, the relevant equation for determing the ERP or EIRP from the conducted RF output power measured using the guidance provided above is:

ERP or EIRP = $P_{Meas} + G_T - L_C$

Where:

ERP or EIRP = effective radiated power or equivalent isotropically 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;

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

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

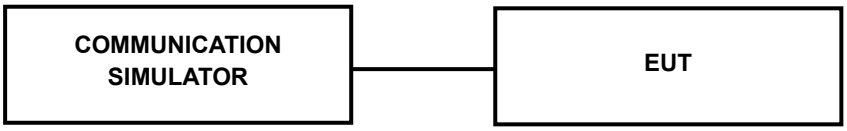
**CONDUCTED POWER MEASUREMENT:**

The EUT was set up for the maximum power with WCDMA link data modulation and link up with simulator. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.

### 3.1.3 TEST SETUP

**EIRP / ERP Measurement:**

**CONDUCTED POWER MEASUREMENT:**




### 3.1.4 TEST RESULTS

**CONDUCTED OUTPUT POWER (dBm):**

| Band | GSM850 | | | | | |
|---|---|---|---|---|---|---|
| | Burst Averaged Power | | | Frame Averaged Power | | |
| Channel | 128 | 189 | 251 | 128 | 189 | 251 |
| Frequency (MHz) | 824.2 | 836.4 | 848.8 | 824.2 | 836.4 | 848.8 |
| GSM | 33.26 | 33.30 | 33.35 | 24.26 | 24.30 | 24.35 |
| GPRS 1Tx Slot | 33.30 | 33.32 | 33.42 | 24.30 | 24.32 | 24.42 |
| GPRS 2Tx Slot | 30.47 | 30.40 | 30.56 | 24.47 | 24.40 | 24.56 |
| GPRS 3Tx Slot | 28.58 | 28.90 | 28.98 | 24.32 | 24.64 | 24.72 |
| GPRS 4Tx Slot | 26.89 | 27.30 | 27.46 | 23.89 | 24.30 | 24.46 |

| Band | WCDMA V | | |
|---|---|---|---|
| TX Channel | 4132 | 4182 | 4233 |
| Rx Channel | 4357 | 4407 | 4458 |
| Frequency (MHz) | 826.4 | 836.4 | 846.6 |
| RMC 12.2K | 23.88 | 23.91 | 24.06 |
| HSDPA Subtest-1 | 22.97 | 22.79 | 22.80 |
| HSDPA Subtest-2 | 22.47 | 22.33 | 22.25 |
| HSDPA Subtest-3 | 22.46 | 22.28 | 22.25 |
| HSDPA Subtest-4 | 22.74 | 22.71 | 22.78 |
| HSUPA Subtest-1 | 22.87 | 22.88 | 23.01 |
| HSUPA Subtest-2 | 20.86 | 20.73 | 20.69 |
| HSUPA Subtest-3 | 21.83 | 21.59 | 21.58 |
| HSUPA Subtest-4 | 20.44 | 20.30 | 20.29 |
| HSUPA Subtest-5 | 21.75 | 21.63 | 21.50 |

| LTE Band 5 | | | | | | |
|---|---|---|---|---|---|---|
| BW [MHz] | Modulation | RB Size | RB Offset | Low | Mid | High |
| | | Channel | | 20450 | 20525 | 20600 |
| | | Frequency (MHz) | | 829 | 836.5 | 844 |
| 10 | QPSK | 1 | 0 | **23.44** | **23.53** | **23.56** |
| | | 1 | 24 | 23.41 | 23.51 | 23.26 |
| | | 1 | 49 | 23.29 | 23.42 | 23.08 |
| | | 25 | 0 | **22.51** | **22.54** | **22.59** |
| | | 25 | 12 | 22.48 | 22.44 | 22.35 |
| | | 25 | 25 | 22.44 | 22.51 | 22.21 |
| | | 50 | 0 | 22.41 | 22.43 | **22.49** |
| | 16QAM | 1 | 0 | 22.54 | 22.77 | 22.80 |
| | | 1 | 24 | 22.65 | 22.79 | 22.72 |
| | | 1 | 49 | 22.55 | 22.59 | 22.38 |
| | | 25 | 0 | 21.45 | 21.57 | 21.41 |
| | | 25 | 12 | 21.54 | 21.63 | 21.48 |
| | | 25 | 25 | 21.59 | 21.49 | 21.32 |
| | | 50 | 0 | 21.50 | 21.56 | 21.47 |
| | 64QAM | 1 | 0 | 21.55 | 21.62 | 21.72 |
| | | 1 | 24 | 21.72 | 21.92 | 21.71 |
| | | 1 | 49 | 21.70 | 21.71 | 21.54 |
| | | 25 | 0 | 20.47 | 20.57 | 20.44 |
| | | 25 | 12 | 20.58 | 20.60 | 20.45 |
| | | 25 | 25 | 20.53 | 20.56 | 20.26 |
| | | 50 | 0 | 20.46 | 20.60 | 20.47 |
| BW [MHz] | Modulation | Channel | | 20425 | 20525 | 20625 |
| | | Frequency (MHz) | | 826.5 | 836.5 | 846.5 |
| 5 | QPSK | 1 | 0 | 23.30 | 23.52 | 23.44 |
| | | 1 | 12 | 23.30 | 23.47 | 23.18 |
| | | 1 | 24 | 23.24 | 23.30 | 23.01 |
| | | 12 | 0 | 22.42 | 22.46 | 22.34 |
| | | 12 | 6 | 22.45 | 22.41 | 22.27 |
| | | 12 | 13 | 22.43 | 22.47 | 22.08 |
| | | 25 | 0 | 22.35 | 22.31 | 22.35 |
| | 16QAM | 1 | 0 | 22.39 | 22.76 | 22.79 |
| | | 1 | 12 | 22.63 | 22.64 | 22.57 |
| | | 1 | 24 | 22.51 | 22.52 | 22.30 |
| | | 12 | 0 | 21.35 | 21.51 | 21.37 |
| | | 12 | 6 | 21.40 | 21.61 | 21.39 |
| | | 12 | 13 | 21.51 | 21.46 | 21.23 |
| | | 25 | 0 | 21.44 | 21.49 | 21.42 |
| | 64QAM | 1 | 0 | 21.40 | 21.52 | 21.65 |
| | | 1 | 12 | 21.67 | 21.77 | 21.63 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | 1 | 24 | 21.69 | 21.64 | 21.42 |
| | | 12 | 0 | 20.38 | 20.47 | 20.41 |
| | | 12 | 6 | 20.45 | 20.49 | 20.35 |
| | | 12 | 13 | 20.41 | 20.53 | 20.22 |
| | | 25 | 0 | 20.42 | 20.50 | 20.46 |
| **BW [MHz]** | **Modulation** | **Channel** | | **20415** | **20525** | **20635** |
| | | **Frequency (MHz)** | | **825.5** | **836.5** | **847.5** |
| 3 | QPSK | 1 | 0 | 23.42 | 23.38 | 23.44 |
| | | 1 | 7 | 23.28 | 23.43 | 23.20 |
| | | 1 | 14 | 23.26 | 23.28 | 23.03 |
| | | 8 | 0 | 22.36 | 22.55 | 22.28 |
| | | 8 | 3 | 22.42 | 22.40 | 22.33 |
| | | 8 | 7 | 22.35 | 22.42 | 22.15 |
| | | 15 | 0 | 22.26 | 22.39 | 22.39 |
| | 16QAM | 1 | 0 | 22.43 | 22.70 | 22.67 |
| | | 1 | 7 | 22.61 | 22.73 | 22.66 |
| | | 1 | 14 | 22.47 | 22.56 | 22.33 |
| | | 8 | 0 | 21.38 | 21.48 | 21.30 |
| | | 8 | 3 | 21.45 | 21.59 | 21.38 |
| | | 8 | 7 | 21.56 | 21.39 | 21.27 |
| | | 15 | 0 | 21.47 | 21.47 | 21.43 |
| | 64QAM | 1 | 0 | 21.41 | 21.53 | 21.65 |
| | | 1 | 7 | 21.70 | 21.81 | 21.69 |
| | | 1 | 14 | 21.65 | 21.67 | 21.44 |
| | | 8 | 0 | 20.42 | 20.44 | 20.37 |
| | | 8 | 3 | 20.48 | 20.47 | 20.31 |
| | | 8 | 7 | 20.40 | 20.43 | 20.22 |
| | | 15 | 0 | 20.35 | 20.56 | 20.46 |
| **BW [MHz]** | **Modulation** | **Channel** | | **20407** | **20525** | **20643** |
| | | **Frequency (MHz)** | | **824.7** | **836.5** | **848.3** |
| 1.4 | QPSK | 1 | 0 | 23.38 | 23.39 | 23.55 |
| | | 1 | 2 | 23.29 | 23.41 | 23.21 |
| | | 1 | 5 | 23.19 | 23.33 | 22.95 |
| | | 3 | 0 | 23.24 | 23.37 | 23.23 |
| | | 3 | 1 | 23.25 | 23.18 | 23.11 |
| | | 3 | 3 | 23.11 | 23.29 | 22.95 |
| | | 6 | 0 | 22.30 | 22.33 | 22.48 |
| | 16QAM | 1 | 0 | 22.48 | 22.75 | 22.75 |
| | | 1 | 2 | 22.59 | 22.73 | 22.66 |
| | | 1 | 5 | 22.44 | 22.48 | 22.37 |
| | | 3 | 0 | 22.23 | 22.24 | 22.17 |
| | | 3 | 1 | 22.28 | 22.44 | 22.18 |
| | | 3 | 3 | 22.34 | 22.20 | 22.02 |
| | | 6 | 0 | 21.43 | 21.49 | 21.35 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | 64QAM | 1 | 0 | 21.50 | 21.55 | 21.63 |
| | | 1 | 2 | 21.71 | 21.77 | 21.62 |
| | | 1 | 5 | 21.66 | 21.61 | 21.43 |
| | | 3 | 0 | 21.21 | 21.30 | 21.23 |
| | | 3 | 1 | 21.30 | 21.33 | 21.20 |
| | | 3 | 3 | 21.28 | 21.27 | 21.00 |
| | | 6 | 0 | 20.37 | 20.53 | 20.40 |

## ERP POWER (dBm)

| GSM850_Ant0 | | | | | | | |
|---|---|---|---|---|---|---|---|
| Modulation | Channel | Frequency (MHz) | Conducted Power (dBm) | Gain (dB) | ERP (dBm) | ERP (mW) | FCC Limit (W) |
| GPRS | 128 | 824.2 | 33.30 | -1.8 | 29.35 | 860.99 | 7 |
| | 189 | 836.4 | 33.32 | -1.8 | 29.37 | 864.97 | 7 |
| | 251 | 848.8 | 33.42 | -1.8 | 29.47 | 885.12 | 7 |

| WCDMA V_Ant0 | | | | | | |
|---|---|---|---|---|---|---|
| Channel | Frequency (MHz) | Conducted Power (dBm) | Gain (dB) | EIRP (dBm) | EIRP (mW) | Limit (W) |
| 4132 | 826.4 | 23.88 | -1.8 | 22.08 | 161.44 | 2 |
| 4182 | 836.4 | 23.91 | -1.8 | 22.11 | 162.55 | 2 |
| 4233 | 846.6 | 24.06 | -1.8 | 22.26 | 168.27 | 2 |

| LTE Band 5_Ant 0 | | | | | | | |
|---|---|---|---|---|---|---|---|
| BW [MHz] Modulation | Channel | Frequency (MHz) | Conducted Power (dBm) | Gain (dB) | ERP (dBm) | ERP (mW) | FCC Limit (W) |
| 10M-QPSK | 20450 | 829 | 23.44 | -1.8 | 19.49 | 88.92 | 7 |
| | 20525 | 836.5 | 23.53 | -1.8 | 19.58 | 90.78 | 7 |
| | 20600 | 844 | 23.56 | -1.8 | 19.61 | 91.41 | 7 |
| 10M-16QAM | 20450 | 829 | 22.65 | -1.8 | 18.70 | 74.13 | 7 |
| | 20525 | 836.5 | 22.79 | -1.8 | 18.84 | 76.56 | 7 |
| | 20600 | 844 | 22.80 | -1.8 | 18.85 | 76.74 | 7 |
| 10M-64QAM | 20450 | 829 | 21.72 | -1.8 | 17.77 | 59.84 | 7 |
| | 20525 | 836.5 | 21.92 | -1.8 | 17.97 | 62.66 | 7 |
| | 20600 | 844 | 21.72 | -1.8 | 17.77 | 59.84 | 7 |
| BW [MHz] Modulation | Channel | Frequency (MHz) | Conducted Power (dBm) | Gain (dB) | ERP (dBm) | ERP (mW) | FCC Limit (W) |
| 5M-QPSK | 20425 | 826.5 | 23.30 | -1.8 | 19.35 | 86.10 | 7 |
| | 20525 | 836.5 | 23.52 | -1.8 | 19.57 | 90.57 | 7 |
| | 20625 | 846.5 | 23.44 | -1.8 | 19.49 | 88.92 | 7 |
| 5M-16QAM | 20425 | 826.5 | 22.63 | -1.8 | 18.68 | 73.79 | 7 |
| | 20525 | 836.5 | 22.76 | -1.8 | 18.81 | 76.03 | 7 |
| | 20625 | 846.5 | 22.79 | -1.8 | 18.84 | 76.56 | 7 |
| 5M-64QAM | 20425 | 826.5 | 21.69 | -1.8 | 17.74 | 59.43 | 7 |
| | 20525 | 836.5 | 21.77 | -1.8 | 17.82 | 60.53 | 7 |
| | 20625 | 846.5 | 21.65 | -1.8 | 17.70 | 58.88 | 7 |
| BW [MHz] Modulation | Channel | Frequency (MHz) | Conducted Power (dBm) | Gain (dB) | ERP (dBm) | ERP (mW) | FCC Limit (W) |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 3M-QPSK | 20415 | 825.5 | 23.42 | -1.8 | 19.47 | 88.51 | 7 |
| | 20525 | 836.5 | 23.43 | -1.8 | 19.48 | 88.72 | 7 |
| | 20635 | 847.5 | 23.44 | -1.8 | 19.49 | 88.92 | 7 |
| 3M-16QAM | 20415 | 825.5 | 22.61 | -1.8 | 18.66 | 73.45 | 7 |
| | 20525 | 836.5 | 22.73 | -1.8 | 18.78 | 75.51 | 7 |
| | 20635 | 847.5 | 22.67 | -1.8 | 18.72 | 74.47 | 7 |
| 3M-64QAM | 20415 | 825.5 | 21.70 | -1.8 | 17.75 | 59.57 | 7 |
| | 20525 | 836.5 | 21.81 | -1.8 | 17.86 | 61.09 | 7 |
| | 20635 | 847.5 | 21.69 | -1.8 | 17.74 | 59.43 | 7 |
| **BW [MHz] Modulation** | **Channel** | **Frequency (MHz)** | **Conducted Power (dBm)** | **Gain (dB)** | **ERP (dBm)** | **ERP (mW)** | **FCC Limit (W)** |
| 1.4M-QPSK | 20407 | 824.7 | 23.38 | -1.8 | 19.43 | 87.70 | 7 |
| | 20525 | 836.5 | 23.41 | -1.8 | 19.46 | 88.31 | 7 |
| | 20643 | 848.3 | 23.55 | -1.8 | 19.60 | 91.20 | 7 |
| 1.4M-16QAM | 20407 | 824.7 | 22.59 | -1.8 | 18.64 | 73.11 | 7 |
| | 20525 | 836.5 | 22.75 | -1.8 | 18.80 | 75.86 | 7 |
| | 20643 | 848.3 | 22.75 | -1.8 | 18.80 | 75.86 | 7 |
| 1.4M-64QAM | 20407 | 824.7 | 21.71 | -1.8 | 17.76 | 59.70 | 7 |
| | 20525 | 836.5 | 21.77 | -1.8 | 17.82 | 60.53 | 7 |
| | 20643 | 848.3 | 21.63 | -1.8 | 17.68 | 58.61 | 7 |

**REMARKS:** ERP Output Power (dBm) = EIRP (dBm) -2.15(dB).

## 3.2 FREQUENCY STABILITY MEASUREMENT

### 3.2.1 LIMITS OF FREQUENCY STABILIITY MEASUREMENT

1.5 ppm is for base and fixed station. 2.5 ppm is for mobile station.

### 3.2.2 TEST PROCEDURE

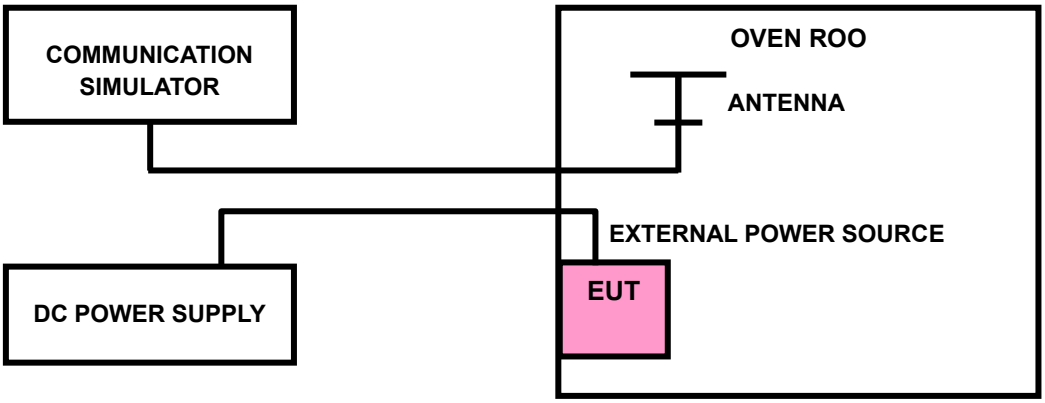
a. Device is placed at the oven room. The oven room could control the temperatures and humidity. Power warm up is at least 15 min and power applied should perform before recording frequency error.

b. EUT is connected the external power supply to control the DC input power. The test voltage range is from minimum to maximum working voltage. Each step shall be record the frequency error rate.

c. The temperature range step is 10 degrees in this test items. All temperature levels shall be hold the ±0.5℃ during the measurement testing. The each temperature step shall be at least 0.5 hours, consider the EUT could be test under the stability condition.

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

### 3.2.3 TEST SETUP




### 3.2.4 TEST RESULTS

Please Refer to Appendix of this test report.

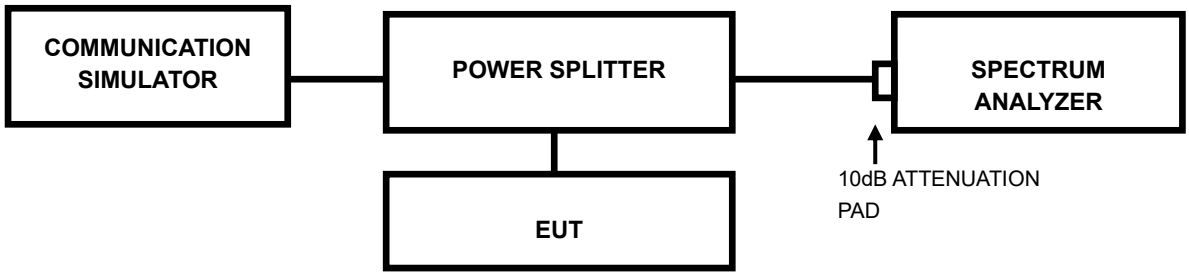
Note: VL = Low voltage(3.501V); VN/NV = Normal voltage(3.89V); VH = High voltage(4.279V); NT = Normal temperature (25℃)

## 3.3 OCCUPIED BANDWIDTH MEASUREMENT

### 3.3.1 LIMITS OF OCCUPIED BANDWIDTH MEASUREMENT

The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5 %of the total mean power of a given emission.

### 3.3.2 TEST SETUP




### 3.3.3 TEST PROCEDURES

a. The conducted occupied bandwidth used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.
b. Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth.

### 3.3.4 TEST RESULTS

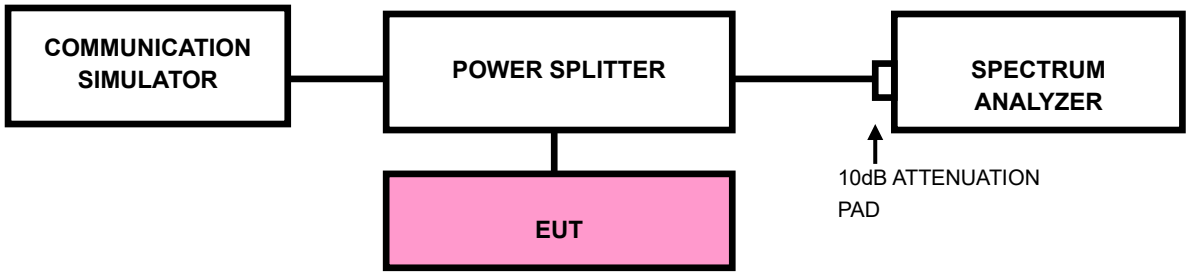
Please Refer to Appendix of this test report.

## 3.4 BAND EDGE MEASUREMENT

### 3.4.1 LIMITS OF BAND EDGE MEASUREMENT

Power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

### 3.4.2 TEST SETUP



### 3.4.3 TEST PROCEDURES

a) All measurements were done at low and high operational frequency range

b) Connect the transmitter to the spectrum analyzer via coaxial cable while ensuring proper impedance matching.

c) Tune the analyzer to the nominal center frequency of the emission bandwidth

(EBW)

d) .Set the resolution bandwidth (RBW) ≧ 1% EBW in the 1MHz band immediately outside and adjacent to the band edge.

e) Beyond the 1MHz band from the band edge, RBW=1MHz was used.

f) Set the video bandwidth (VBW) to ≧3 x RBW.

g) Select the average power (RMS) display detector.

h) Set the number of measurement points to ≧ 1001.

i) Use auto-coupled sweep time.

j) Perform the measurement over an interval of time when the transmission is continuous and at its maximum power level.

k) The RF fundamental frequency should be excluded against the limit line in the operating frequency band and use RBW is 10KHz or 100KHz.

l) Record the max trace plot into the test report.

### 3.4.4 TEST RESULTS

Please Refer to Appendix of this test report.

## 3.5 CONDUCTED SPURIOUS EMISSIONS

### 3.5.1 LIMITS OF CONDUCTED SPURIOUS EMISSIONS MEASUREMENT

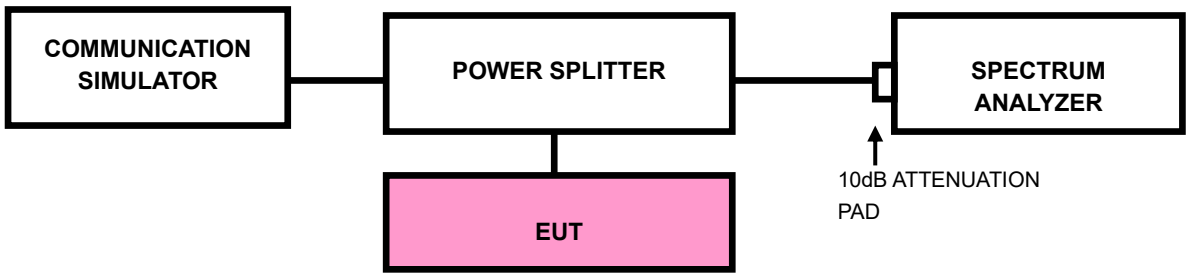
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB. The emission limit equal to –13dBm.

### 3.5.2 TEST PROCEDURE

a. The EUT makes a phone call to the communication simulator. All measurements were done at low, middle and high operational frequency range.

b. Measuring frequency range is from 9kHz up to a frequency including its 10 th harmonic. 10dB attenuation pad is connected with spectrum. RBW=1MHz and VBW=3MHz is used for conducted emission measurement.

### 3.5.3 TEST SETUP




### 3.5.4 TEST RESULTS

NOTE： The 9K~30MHz amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required in the report.

Please Refer to Appendix of this test report.

## 3.6 RADIATED EMISSION MEASUREMENT

### 3.6.1 LIMITS OF RADIATED EMISSION MEASUREMENT

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB. The emission limit equal to –13dBm.

### 3.6.2 TEST PROCEDURES

a. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The “Read Value” is the spectrum reading the maximum power value.

b. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to “Read Value “ of step a. Record the power level of S.G

c. EIRP = Output power level of S.G – TX cable loss + Antenna gain of substitution horn.

d. E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole, E.R.P power = E.I.P.R power - 2.15dBi.

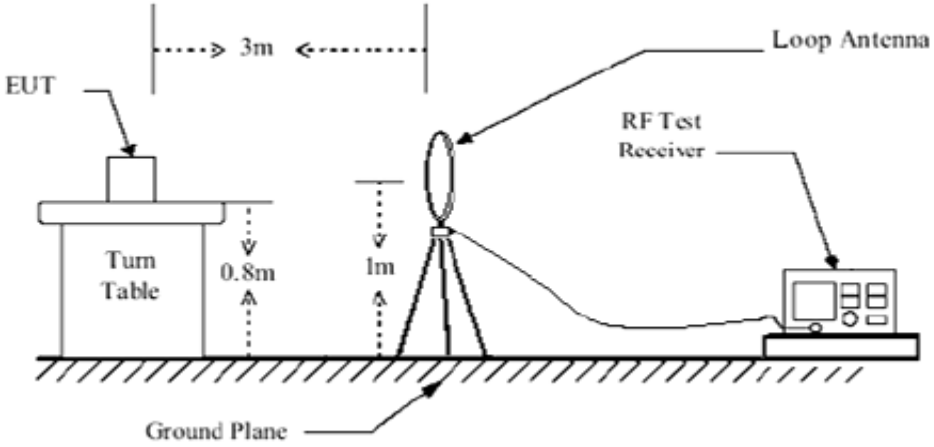
**NOTE:** The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.

### 3.6.3 DEVIATION FROM TEST STANDARD

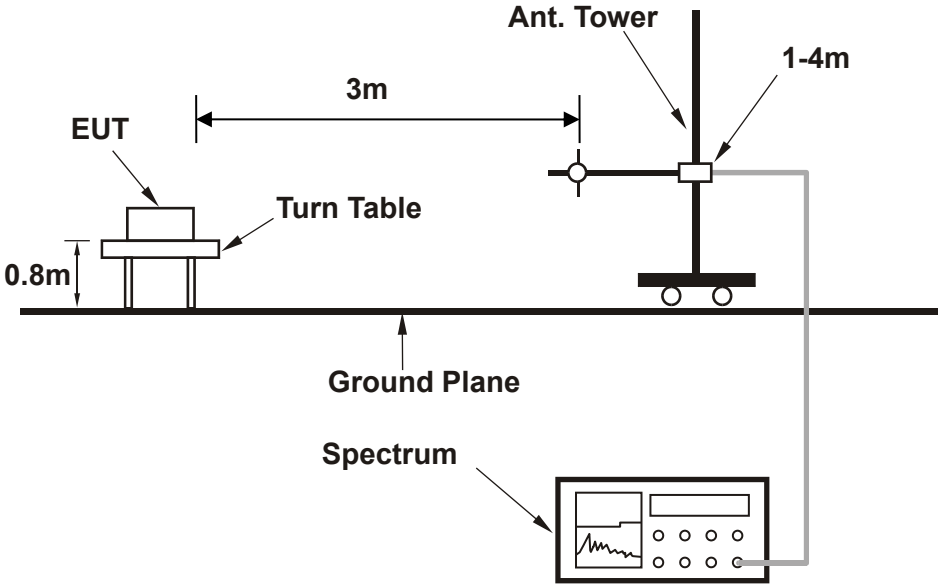
No deviation

### 3.6.4 TEST SETUP

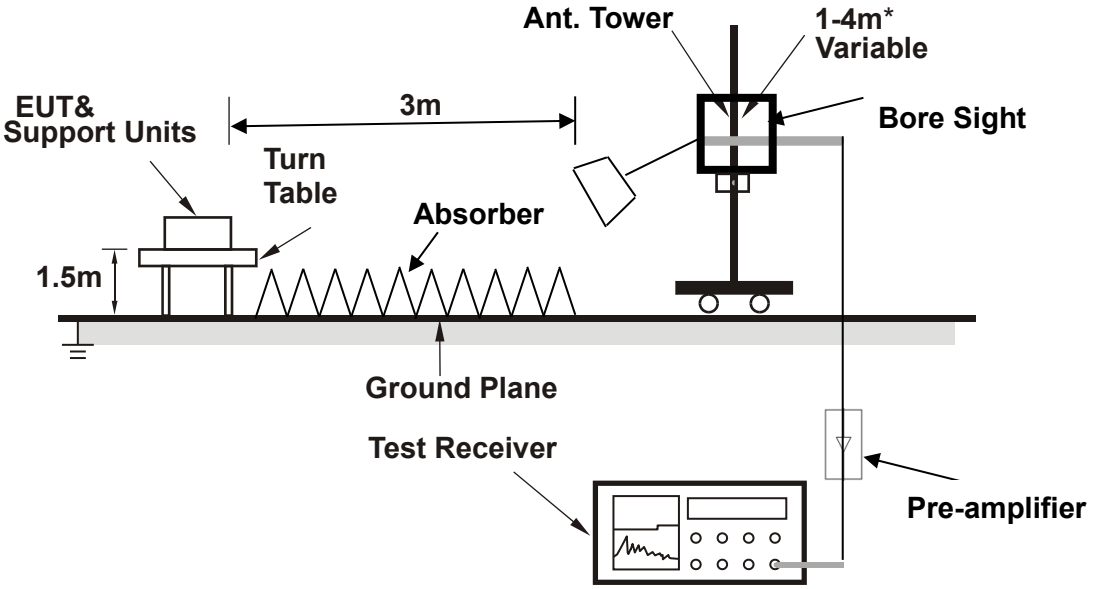
**< Frequency Range below 30MHz >**




**< Frequency Range 30MHz~1GHz >**



**<Frequency Range above 1GHz>**




**Note**: Above 1G is a directional antenna

Depends on the EUT height and the antenna 3dB beamwidth both, refer to section 7.3 of CISPR 16-2-3.

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

### 3.6.5 TEST RESULTS

NOTE： The 9K~30MHz amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required in the report.

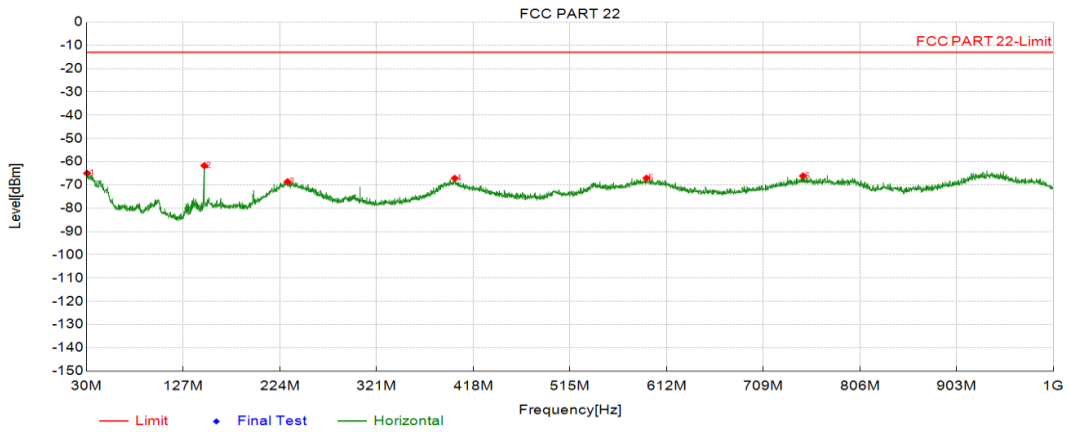
| BELOW 1GHz WORST-CASE DATA |
|---|

| WCDMA B5 | | | |
|---|---|---|---|
| **MODE** | TX channel 4132 | **FREQUENCY RANGE** | Below 1000MHz |
| **ENVIRONMENTAL CONDITIONS** | 23deg. C, 70%RH | **INPUT POWER** | 120Vac 60HZ |
| **TESTED BY** | Carl Xie | | |

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

Data List

| NO. | Frequency [MHz] | Reading [dBm] | Level [dBm] | Factor [dB] | Limit [dBm] | Margin [dB] | Polarity | Detector | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 30.7762 | -62.81 | -64.95 | -2.14 | -13.00 | 51.95 | Horizon | PK | PASS |
| 2 | 148.3637 | -44.81 | -61.68 | -16.87 | -13.00 | 48.68 | Horizon | PK | PASS |
| 3 | 231.8004 | -63.81 | -68.59 | -4.78 | -13.00 | 55.59 | Horizon | PK | PASS |
| 4 | 399.4499 | -64.89 | -67.11 | -2.22 | -13.00 | 54.11 | Horizon | PK | PASS |
| 5 | 591.7423 | -65.92 | -67.07 | -1.15 | -13.00 | 54.07 | Horizon | PK | PASS |
| 6 | 748.7197 | -67.15 | -66.09 | 1.06 | -13.00 | 53.09 | Horizon | PK | PASS |

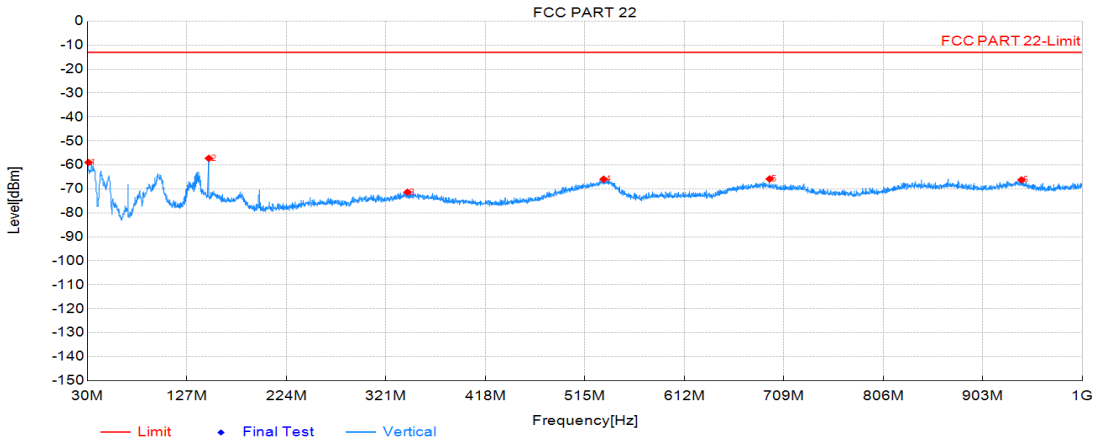


| MODE | TX channel 4132 | FREQUENCY RANGE | Below 1000MHz |
|---|---|---|---|
| ENVIRONMENTAL CONDITIONS | 23deg. C, 70%RH | INPUT POWER | 120Vac 60HZ |
| TESTED BY | Carl Xie | | |

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

Data List

| NO. | Frequency [MHz] | Reading [dBm] | Level [dBm] | Factor [dB] | Limit [dBm] | Margin [dB] | Polarity | Detector | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 31.3583 | -49.74 | -58.95 | -9.21 | -13.00 | 45.95 | Vertical | PK | PASS |
| 2 | 148.5577 | -47.31 | -57.21 | -9.90 | -13.00 | 44.21 | Vertical | PK | PASS |
| 3 | 342.2084 | -64.07 | -71.37 | -7.30 | -13.00 | 58.37 | Vertical | PK | PASS |
| 4 | 533.3367 | -65.71 | -65.95 | -0.24 | -13.00 | 52.95 | Vertical | PK | PASS |
| 5 | 695.165 | -65.38 | -65.85 | -0.47 | -13.00 | 52.85 | Vertical | PK | PASS |
| 6 | 940.6241 | -67.82 | -66.22 | 1.60 | -13.00 | 53.22 | Vertical | PK | PASS |



## ABOVE 1GHz DATA

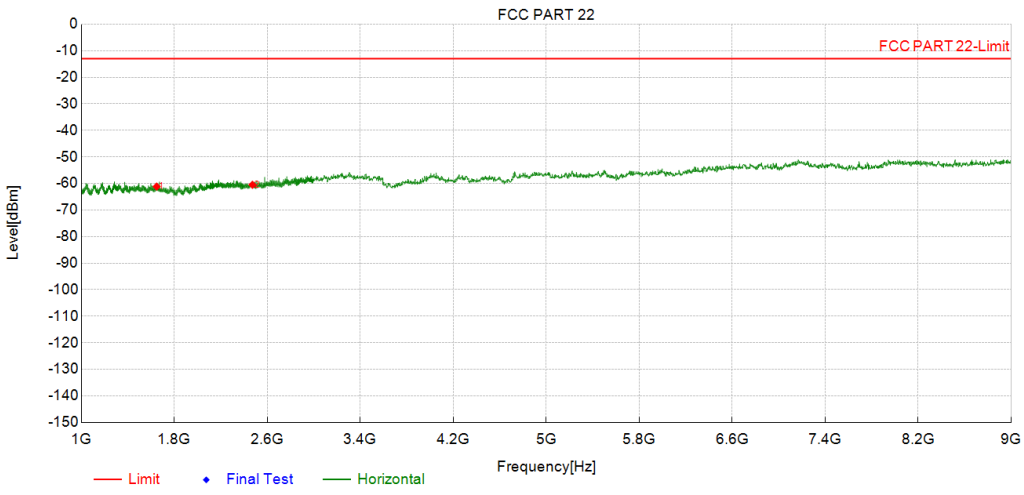
**Note:** For higher frequency, the emission is too low to be detected.

| GSM 850 | | | |
|---|---|---|---|
| **MODE** | TX channel 128 | **FREQUENCY RANGE** | Above 1000MHz |
| **ENVIRONMENTAL CONDITIONS** | 23deg. C, 70%RH | **INPUT POWER** | 120Vac 60HZ |
| **TESTED BY** | Carl Xie | | |

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

Data List

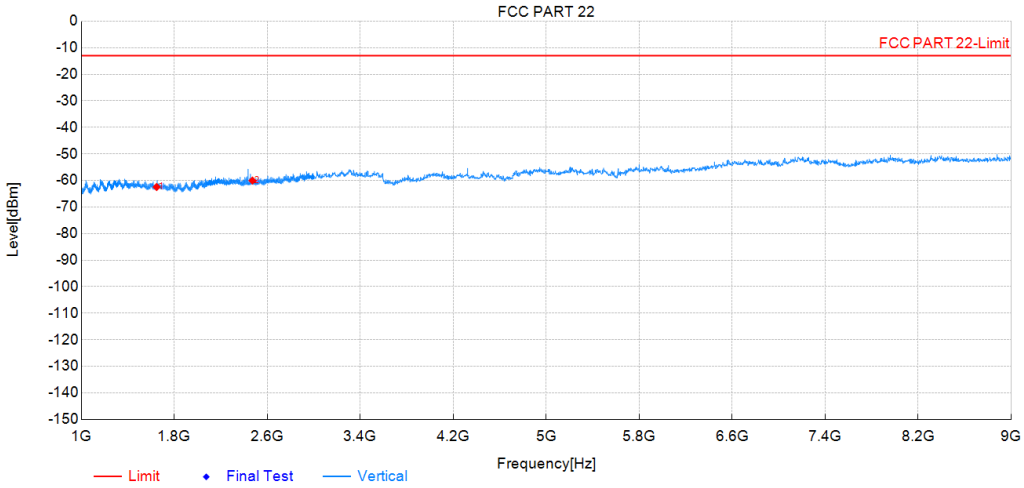
| NO. | Frequency [MHz] | Reading [dBm] | Level [dBm] | Factor [dB] | Limit [dBm] | Margin [dB] | Polarity | Detector | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1648.5297 | -51.66 | -61.15 | -9.49 | -13.00 | 48.15 | Horizon | PK | PASS |
| 2 | 2472.6945 | -54.33 | -60.49 | -6.16 | -13.00 | 47.49 | Horizon | PK | PASS |



| MODE | TX channel 128 | FREQUENCY RANGE | Above 1000MHz |
|---|---|---|---|
| ENVIRONMENTAL CONDITIONS | 23deg. C, 70%RH | INPUT POWER | 120Vac 60HZ |
| TESTED BY | Carl Xie | | |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | |

Data List

| NO. | Frequency [MHz] | Reading [dBm] | Level [dBm] | Factor [dB] | Limit [dBm] | Margin [dB] | Polarity | Detector | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1648.5297 | -52.90 | -62.44 | -9.54 | -13.00 | 49.44 | Vertical | PK | PASS |
| 2 | 2472.6945 | -54.00 | -60.03 | -6.03 | -13.00 | 47.03 | Vertical | PK | PASS |

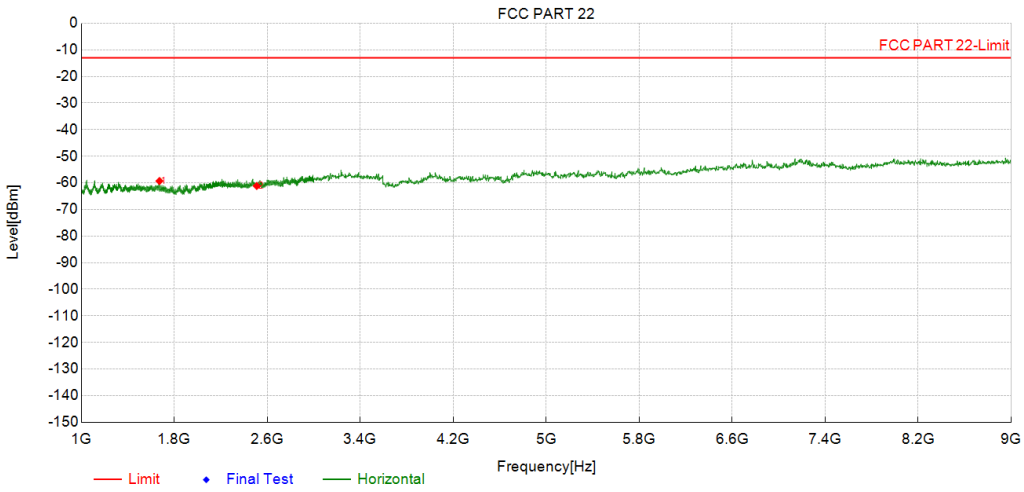


| MODE | TX channel 189 | FREQUENCY RANGE | Above 1000MHz |
|---|---|---|---|
| ENVIRONMENTAL CONDITIONS | 23deg. C, 70%RH | INPUT POWER | 120Vac 60HZ |
| TESTED BY | Carl Xie | | |

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

Data List

| NO. | Frequency [MHz] | Reading [dBm] | Level [dBm] | Factor [dB] | Limit [dBm] | Margin [dB] | Polarity | Detector | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1672.9346 | -49.72 | -59.30 | -9.58 | -13.00 | 46.30 | Horizon | PK | PASS |
| 2 | 2509.5019 | -55.17 | -61.15 | -5.98 | -13.00 | 48.15 | Horizon | PK | PASS |

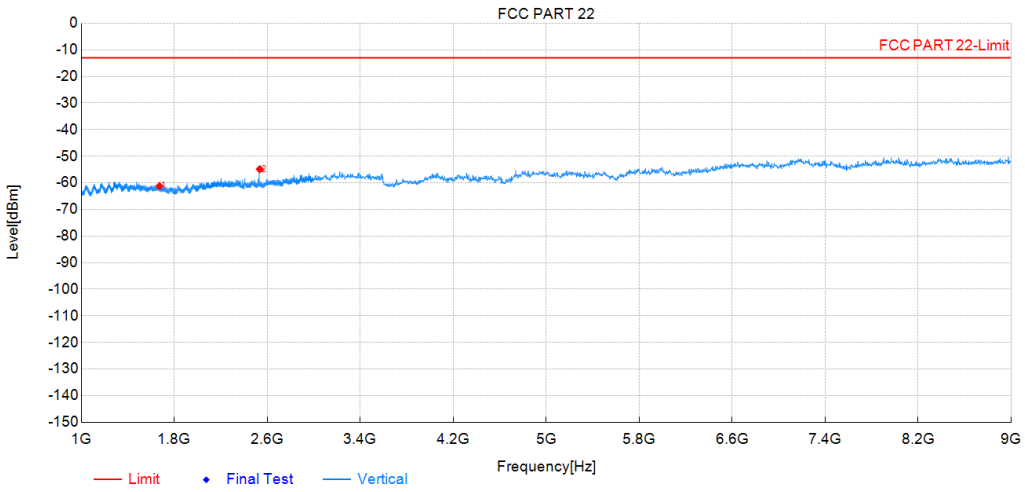


| MODE | TX channel 189 | FREQUENCY RANGE | Above 1000MHz |
|---|---|---|---|
| ENVIRONMENTAL CONDITIONS | 23deg. C, 70%RH | INPUT POWER | 120Vac 60HZ |
| TESTED BY | Carl Xie | | |

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

Data List

| NO. | Frequency [MHz] | Reading [dBm] | Level [dBm] | Factor [dB] | Limit [dBm] | Margin [dB] | Polarity | Detector | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1672.9346 | -51.62 | -61.21 | -9.59 | -13.00 | 48.21 | Vertical | PK | PASS |
| 2 | 2535.5071 | -49.09 | -54.86 | -5.77 | -13.00 | 41.86 | Vertical | PK | PASS |

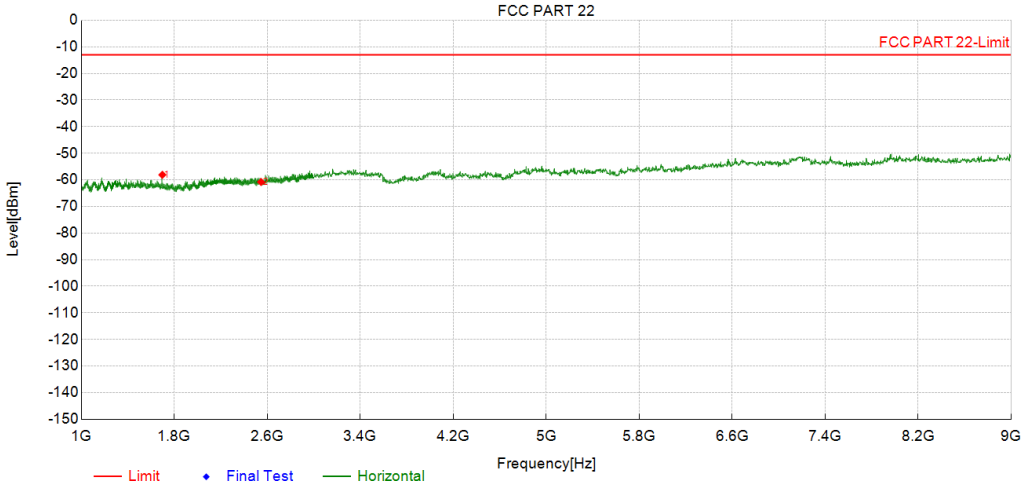


| MODE | TX channel 251 | FREQUENCY RANGE | Above 1000MHz |
|---|---|---|---|
| ENVIRONMENTAL CONDITIONS | 23deg. C, 70%RH | INPUT POWER | 120Vac 60HZ |
| TESTED BY | Carl Xie | | |

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

Data List

| NO. | Frequency [MHz] | Reading [dBm] | Level [dBm] | Factor [dB] | Limit [dBm] | Margin [dB] | Polarity | Detector | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1697.7395 | -48.44 | -58.10 | -9.66 | -13.00 | 45.10 | Horizon | PK | PASS |
| 2 | 2546.7093 | -54.98 | -60.79 | -5.81 | -13.00 | 47.79 | Horizon | PK | PASS |

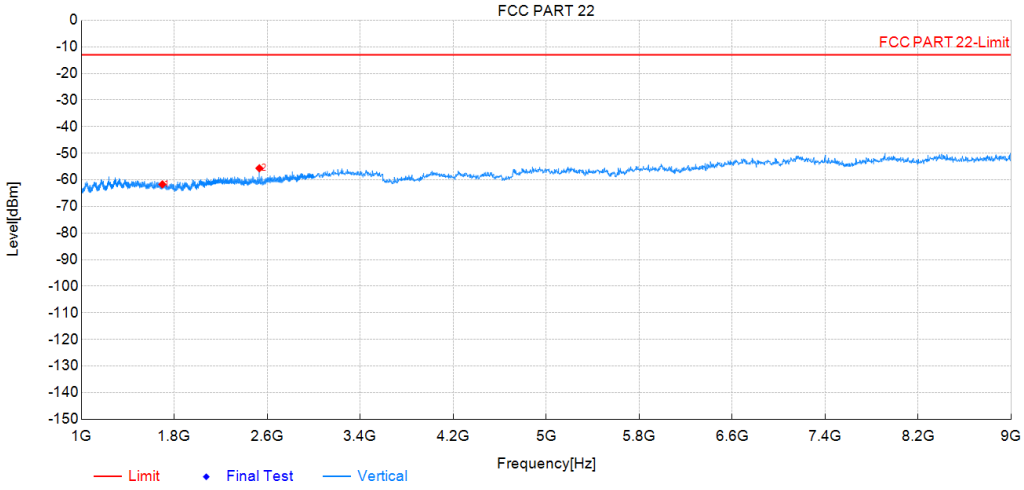


| MODE | TX channel 251 | FREQUENCY RANGE | Above 1000MHz |
|---|---|---|---|
| ENVIRONMENTAL CONDITIONS | 23deg. C, 70%RH | INPUT POWER | 120Vac 60HZ |
| TESTED BY | Carl Xie | | |

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

Data List

| NO. | Frequency [MHz] | Reading [dBm] | Level [dBm] | Factor [dB] | Limit [dBm] | Margin [dB] | Polarity | Detector | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1697.7395 | -52.05 | -61.69 | -9.64 | -13.00 | 48.69 | Vertical | PK | PASS |
| 2 | 2532.3065 | -49.85 | -55.63 | -5.78 | -13.00 | 42.63 | Vertical | PK | PASS |

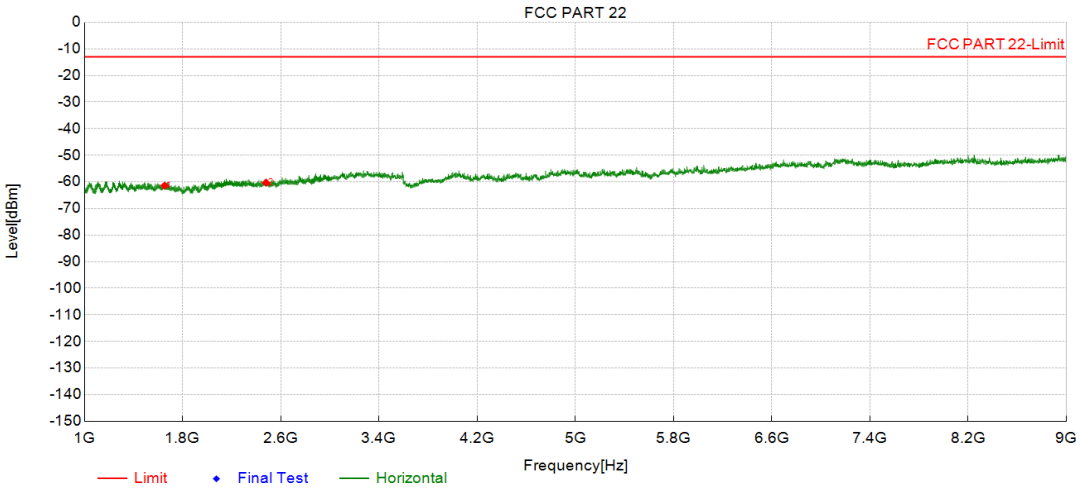


| WCDMA Band V | | | |
|---|---|---|---|
| **MODE** | TX channel 4132 | **FREQUENCY RANGE** | Above 1000MHz |
| **ENVIRONMENTAL CONDITIONS** | 23deg. C, 70%RH | **INPUT POWER** | 120Vac 60HZ |
| **TESTED BY** | Carl Xie | | |

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

Data List

| NO. | Frequency [MHz] | Reading [dBm] | Level [dBm] | Factor [dB] | Limit [dBm] | Margin [dB] | Polarity | Detector | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1652.9306 | -51.92 | -61.44 | -9.52 | -13.00 | 48.44 | Horizon | PK | PASS |
| 2 | 2479.4959 | -54.17 | -60.30 | -6.13 | -13.00 | 47.30 | Horizon | PK | PASS |

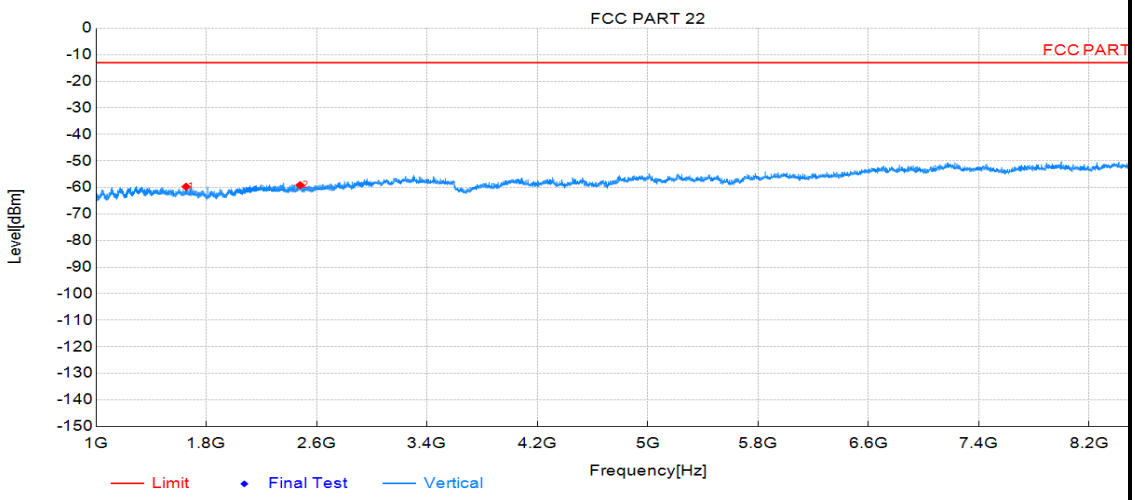


| MODE | TX channel 4132 | FREQUENCY RANGE | Above 1000MHz |
|---|---|---|---|
| ENVIRONMENTAL CONDITIONS | 23deg. C, 70%RH | INPUT POWER | 120Vac 60HZ |
| TESTED BY | Carl Xie | | |

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

Data List

| NO. | Frequency [MHz] | Reading [dBm] | Level [dBm] | Factor [dB] | Limit [dBm] | Margin [dB] | Polarity | Detector | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1652.9306 | -50.14 | -59.70 | -9.56 | -13.00 | 46.70 | Vertical | PK | PASS |
| 2 | 2479.4959 | -53.09 | -59.10 | -6.01 | -13.00 | 46.10 | Vertical | PK | PASS |

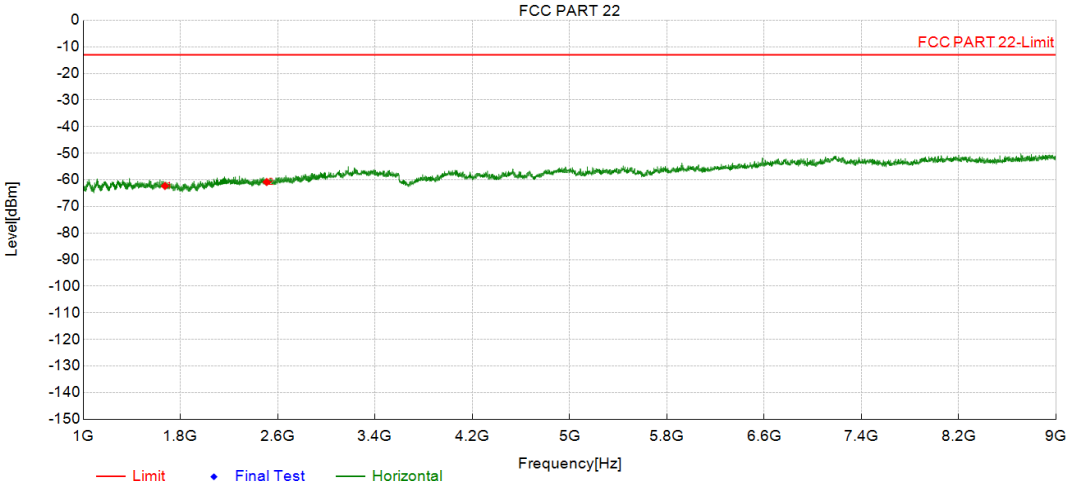


| MODE | TX channel 4182 | FREQUENCY RANGE | Above 1000MHz |
|---|---|---|---|
| ENVIRONMENTAL CONDITIONS | 23deg. C, 70%RH | INPUT POWER | 120Vac 60HZ |
| TESTED BY | Carl Xie | | |

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

Data List

| NO. | Frequency [MHz] | Reading [dBm] | Level [dBm] | Factor [dB] | Limit [dBm] | Margin [dB] | Polarity | Detector | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1672.9346 | -52.71 | -62.29 | -9.58 | -13.00 | 49.29 | Horizon | PK | PASS |
| 2 | 2509.5019 | -54.82 | -60.80 | -5.98 | -13.00 | 47.80 | Horizon | PK | PASS |

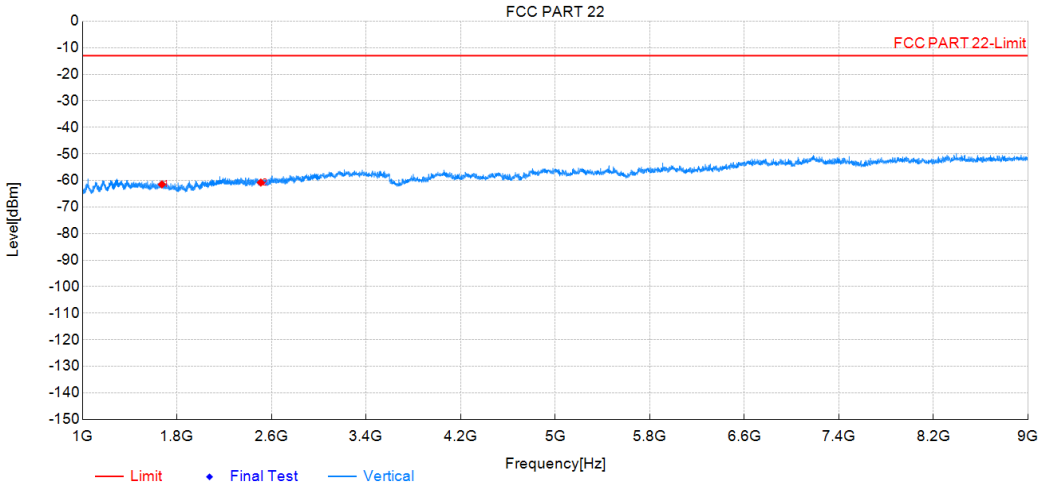


| MODE | TX channel 4182 | FREQUENCY RANGE | Above 1000MHz |
|---|---|---|---|
| ENVIRONMENTAL CONDITIONS | 23deg. C, 70%RH | INPUT POWER | 120Vac 60HZ |
| TESTED BY | Carl Xie | | |

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

Data List

| NO. | Frequency [MHz] | Reading [dBm] | Level [dBm] | Factor [dB] | Limit [dBm] | Margin [dB] | Polarity | Detector | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1672.9346 | -51.88 | -61.47 | -9.59 | -13.00 | 48.47 | Vertical | PK | PASS |
| 2 | 2509.5019 | -54.90 | -60.77 | -5.87 | -13.00 | 47.77 | Vertical | PK | PASS |

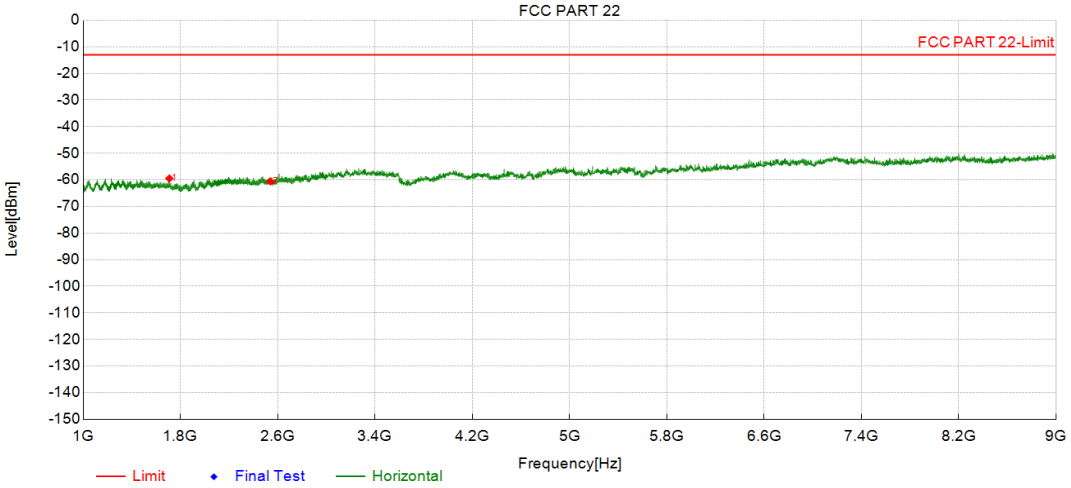


| MODE | TX channel 4233 | FREQUENCY RANGE | Above 1000MHz |
|---|---|---|---|
| ENVIRONMENTAL CONDITIONS | 23deg. C, 70%RH | INPUT POWER | 120Vac 60HZ |
| TESTED BY | Carl Xie | | |

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

Data List

| NO. | Frequency [MHz] | Reading [dBm] | Level [dBm] | Factor [dB] | Limit [dBm] | Margin [dB] | Polarity | Detector | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1709.3419 | -49.76 | -59.45 | -9.69 | -13.00 | 46.45 | Horizon | PK | PASS |
| 2 | 2539.908 | -54.74 | -60.58 | -5.84 | -13.00 | 47.58 | Horizon | PK | PASS |

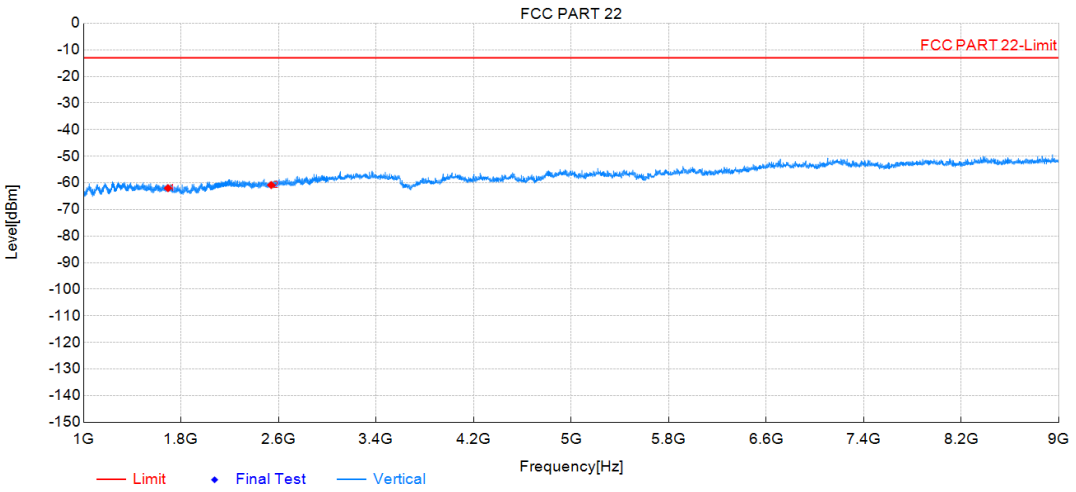


| MODE | TX channel 4233 | FREQUENCY RANGE | Above 1000MHz |
|---|---|---|---|
| ENVIRONMENTAL CONDITIONS | 23deg. C, 70%RH | INPUT POWER | 120Vac 60HZ |
| TESTED BY | Carl Xie | | |

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

Data List

| NO. | Frequency [MHz] | Reading [dBm] | Level [dBm] | Factor [dB] | Limit [dBm] | Margin [dB] | Polarity | Detector | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1693.3387 | -52.35 | -61.98 | -9.63 | -13.00 | 48.98 | Vertical | PK | PASS |
| 2 | 2539.908 | -55.07 | -60.82 | -5.75 | -13.00 | 47.82 | Vertical | PK | PASS |



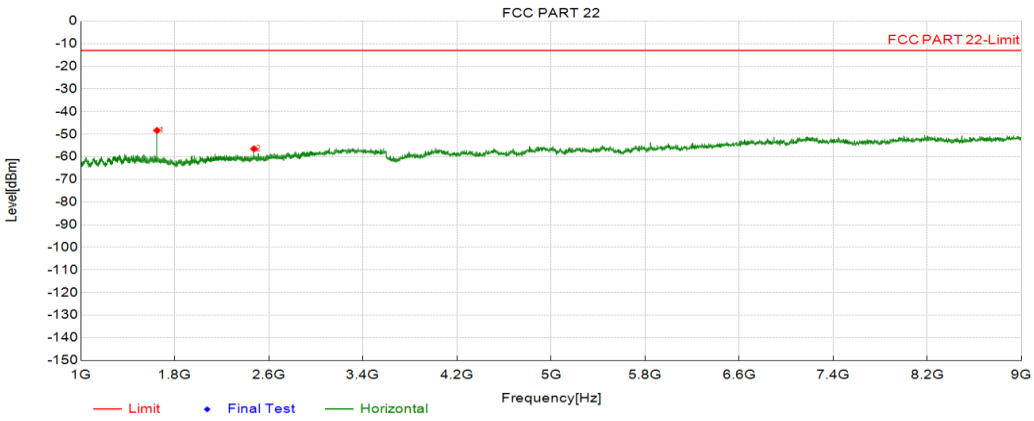
## LTE Band 5

| | | | |
|---|---|---|---|
| **CHANNEL BANDWIDTH** | 10MHz/QPSK | **MODE** | TX channel 20450 |
| **FREQUENCY RANGE** | Above 1000MHz | **ENVIRONMENTAL CONDITIONS** | 23deg. C, 70%RH |
| **INPUT POWER** | 120Vac 60HZ | **TESTED BY** | Carl Xie |

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

Data List

| NO. | Frequency [MHz] | Reading [dBm] | Level [dBm] | Factor [dB] | Limit [dBm] | Margin [dB] | Polarity | Detector | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1648.9298 | -38.83 | -48.32 | -9.49 | -13.00 | 35.32 | Horizon | PK | PASS |
| 2 | 2473.8948 | -50.28 | -56.44 | -6.16 | -13.00 | 43.44 | Horizon | PK | PASS |

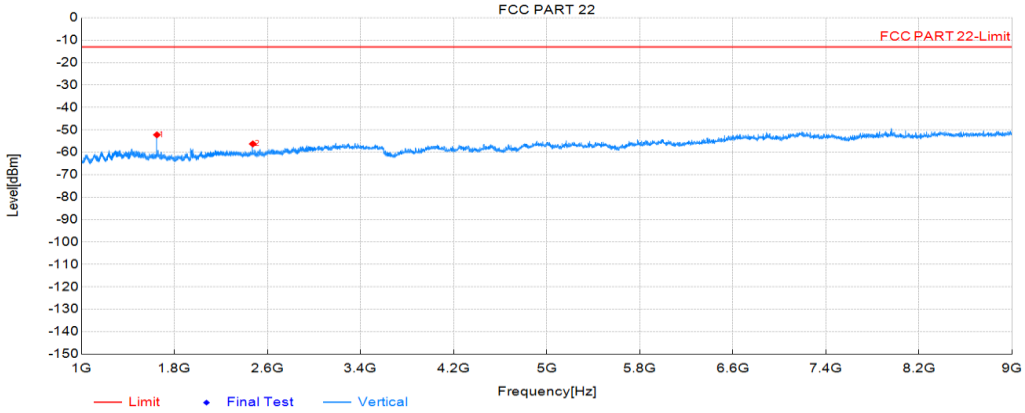


| CHANNEL BANDWIDTH | 10MHz/QPSK | MODE | TX channel 20450 |
|---|---|---|---|
| FREQUENCY RANGE | Above 1000MHz | ENVIRONMENTAL CONDITIONS | 23deg. C, 70%RH |
| INPUT POWER | 120Vac 60HZ | TESTED BY | Carl Xie |

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

Data List

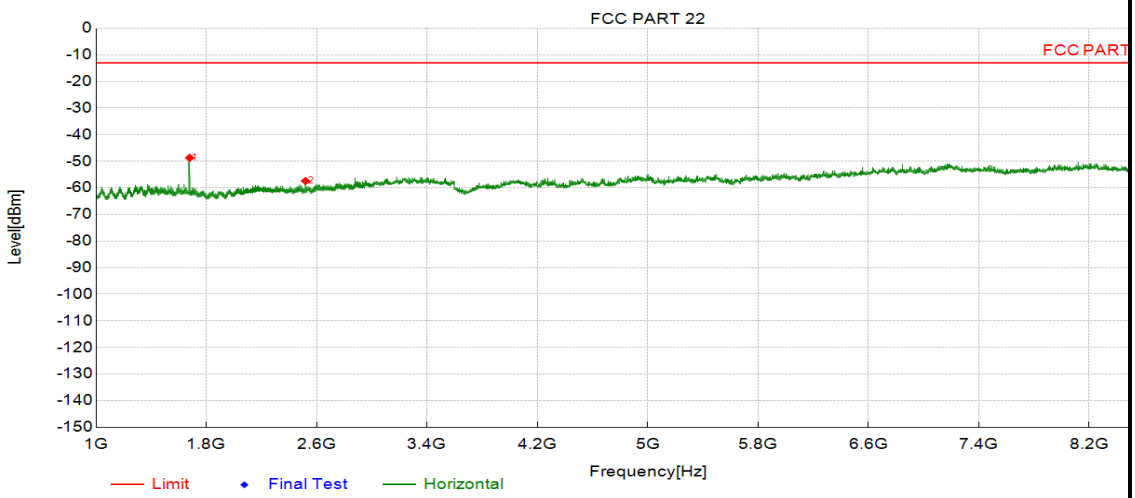
| NO. | Frequency [MHz] | Reading [dBm] | Level [dBm] | Factor [dB] | Limit [dBm] | Margin [dB] | Polarity | Detector | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1649.3299 | -42.66 | -52.20 | -9.54 | -13.00 | 39.20 | Vertical | PK | PASS |
| 2 | 2473.4947 | -50.21 | -56.24 | -6.03 | -13.00 | 43.24 | Vertical | PK | PASS |



| CHANNEL BANDWIDTH | 10MHz/QPSK | MODE | TX channel 20525 |
|---|---|---|---|
| FREQUENCY RANGE | Above 1000MHz | ENVIRONMENTAL CONDITIONS | 23deg. C, 70%RH |
| INPUT POWER | 120Vac 60HZ | TESTED BY | Carl Xie |
| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | |

Data List

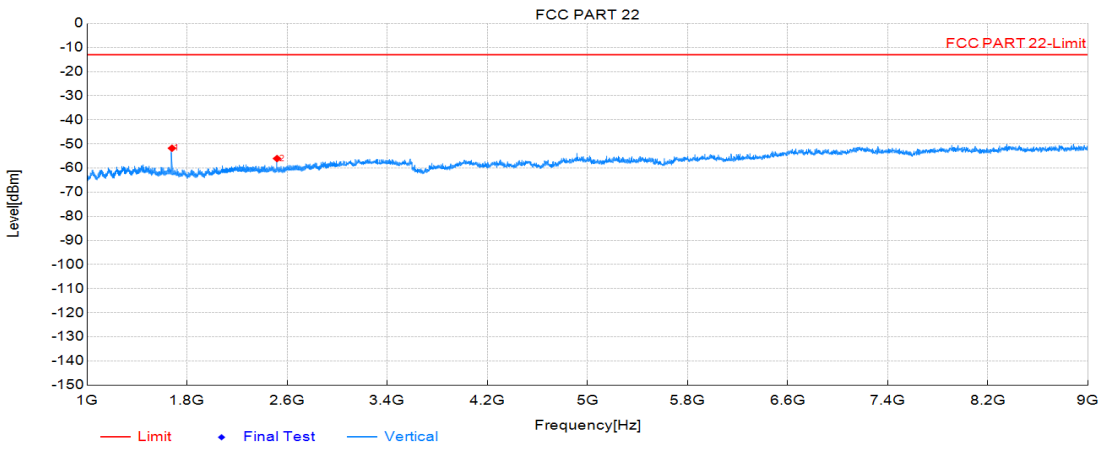
| NO. | Frequency [MHz] | Reading [dBm] | Level [dBm] | Factor [dB] | Limit [dBm] | Margin [dB] | Polarity | Detector | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1679.3359 | -39.09 | -48.69 | -9.60 | -13.00 | 35.69 | Horizon | PK | PASS |
| 2 | 2519.1038 | -51.46 | -57.40 | -5.94 | -13.00 | 44.40 | Horizon | PK | PASS |



| | | | |
|---|---|---|---|
| **CHANNEL BANDWIDTH** | 10MHz/QPSK | **MODE** | TX channel 20525 |
| **FREQUENCY RANGE** | Above 1000MHz | **ENVIRONMENTAL CONDITIONS** | 23deg. C, 70%RH |
| **INPUT POWER** | 120Vac 60HZ | **TESTED BY** | Carl Xie |
| **ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M** | | | |

Data List

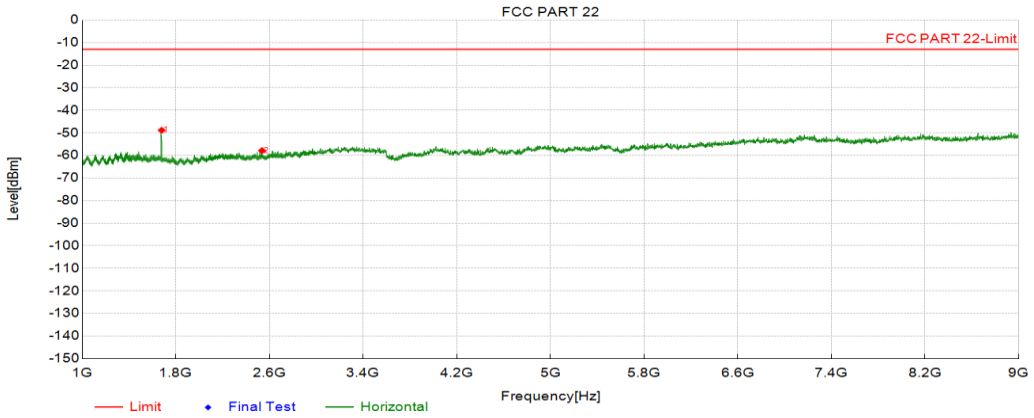
| NO. | Frequency [MHz] | Reading [dBm] | Level [dBm] | Factor [dB] | Limit [dBm] | Margin [dB] | Polarity | Detector | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1679.3359 | -42.15 | -51.75 | -9.60 | -13.00 | 38.75 | Vertical | PK | PASS |
| 2 | 2518.7037 | -50.20 | -56.04 | -5.84 | -13.00 | 43.04 | Vertical | PK | PASS |



| CHANNEL BANDWIDTH | 10MHz/QPSK | MODE | TX channel 20600 |
|---|---|---|---|
| FREQUENCY RANGE | Above 1000MHz | ENVIRONMENTAL CONDITIONS | 23deg. C, 70%RH |
| INPUT POWER | 120Vac 60HZ | TESTED BY | Carl Xie |
| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | |

Data List

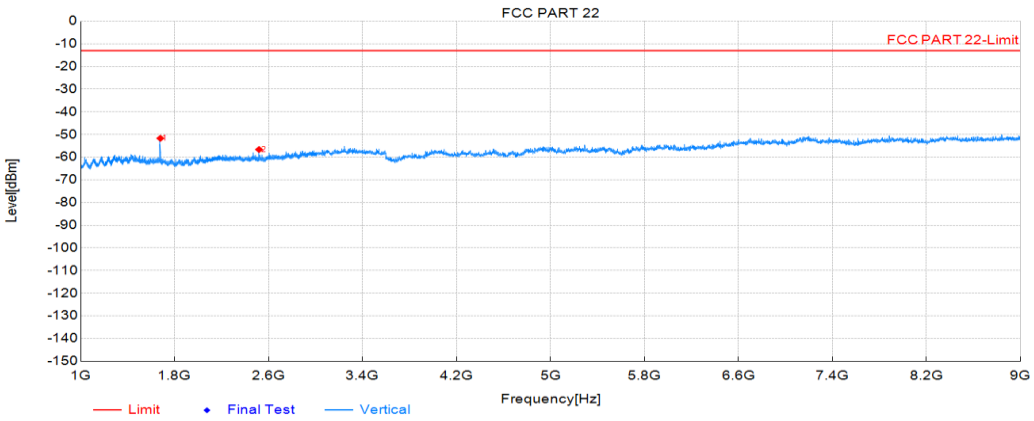
| NO. | Frequency [MHz] | Reading [dBm] | Level [dBm] | Factor [dB] | Limit [dBm] | Margin [dB] | Polarity | Detector | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1679.3359 | -39.25 | -48.85 | -9.60 | -13.00 | 35.85 | Horizon | PK | PASS |
| 2 | 2536.7073 | -52.00 | -57.85 | -5.85 | -13.00 | 44.85 | Horizon | PK | PASS |



| | | | |
|---|---|---|---|
| **CHANNEL BANDWIDTH** | 10MHz/QPSK | **MODE** | TX channel 20600 |
| **FREQUENCY RANGE** | Above 1000MHz | **ENVIRONMENTAL CONDITIONS** | 23deg. C, 70%RH |
| **INPUT POWER** | 120Vac 60HZ | **TESTED BY** | Carl Xie |
| **ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M** | | | |

Data List

| NO. | Frequency [MHz] | Reading [dBm] | Level [dBm] | Factor [dB] | Limit [dBm] | Margin [dB] | Polarity | Detector | Verdict |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 1678.9358 | -42.07 | -51.67 | -9.60 | -13.00 | 38.67 | Vertical | PK | PASS |
| 2 | 2518.7037 | -50.77 | -56.61 | -5.84 | -13.00 | 43.61 | Vertical | PK | PASS |

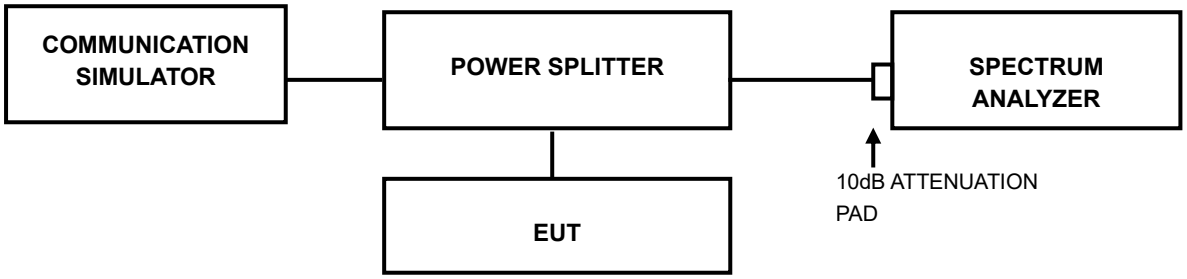


## 3.7 PEAK TO AVERAGE RATIO

### 3.7.1 LIMITS OF PEAK TO AVERAGE RATIO MEASUREMENT

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

### 3.7.2 TEST SETUP




### 3.7.3 TEST PROCEDURES

1. Set resolution/measurement bandwidth ≥ signal's occupied bandwidth;
2. Set the number of counts to a value that stabilizes the measured CCDF curve;
3. Record the maximum PAPR level associated with a probability of 0.1%.

### 3.7.4 TEST RESULTS

Please Refer to Appendix of this test report.

# 4 PHOTOGRAPHS OF THE TEST CONFIGURATION

Please refer to the attached file (Test Setup Photo).

# 5 INFORMATION ON THE TESTING LABORATORIES

We, BOOMWAVE TEST (SHENZHEN) CO., LTD., were founded in 2025 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

BOOMWAVE TEST (SHENZHEN) CO., LTD.
Lab Address:
Room B38, Warehouse A5(Chiwan No.1), No.3 Chiwan 4th Road, Chiwan Community, Zhaoshang Street, Nanshan District, Shenzhen, Guangdong, P.R. CHINA

Accredited Test Lab Cert 7607.01

**Shenzhen EMC/RF Lab**:
**Mobile:** +86 15118052731
**Email:** shimin.wang@boomwavelab.com

# 6 MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No any modifications are made to the EUT by the lab during the test.

# 7 APPENDIX:

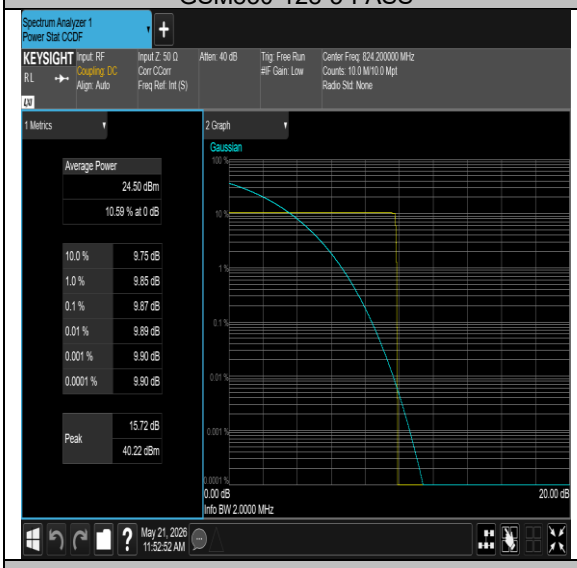
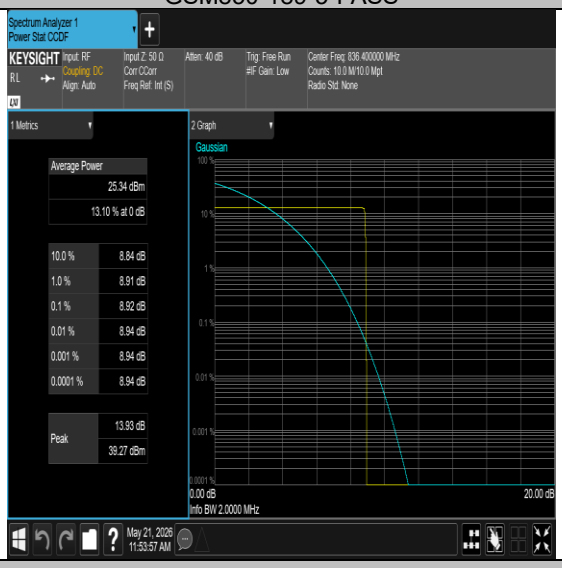
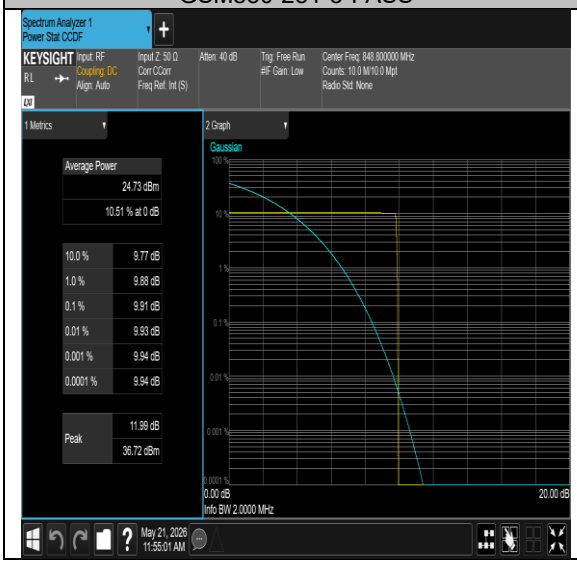
## GSM850

## PEAK-TO-AVERAGE RATIO(CCDF)

## Test Result

| Band | Channel | Result(dB) | Limit(dB) | Verdict |
|---|---|---|---|---|
| GSM850 | 128 | 9.87 | 13 | PASS |
| GSM850 | 189 | 8.92 | 13 | PASS |
| GSM850 | 251 | 9.91 | 13 | PASS |

## Test Graphs

| GSM850-128-5-PASS | GSM850-189-5-PASS |
|---|---|
|  |  |
| GSM850-251-5-PASS | |
|  | |

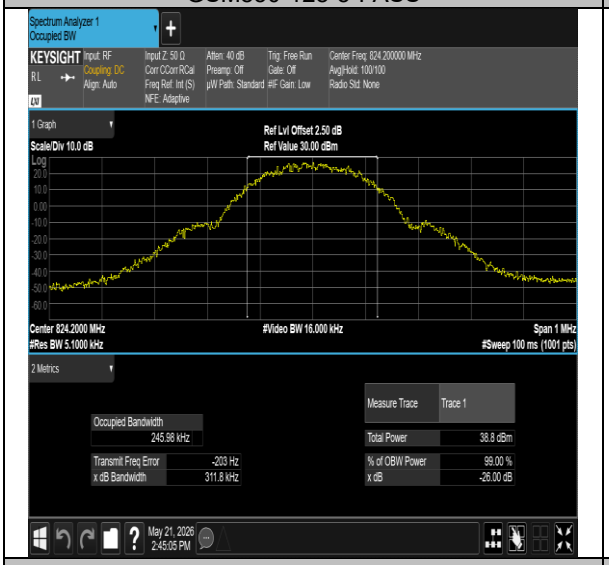
# 26DB BANDWIDTH AND OCCUPIED BANDWIDTH

## Test Result

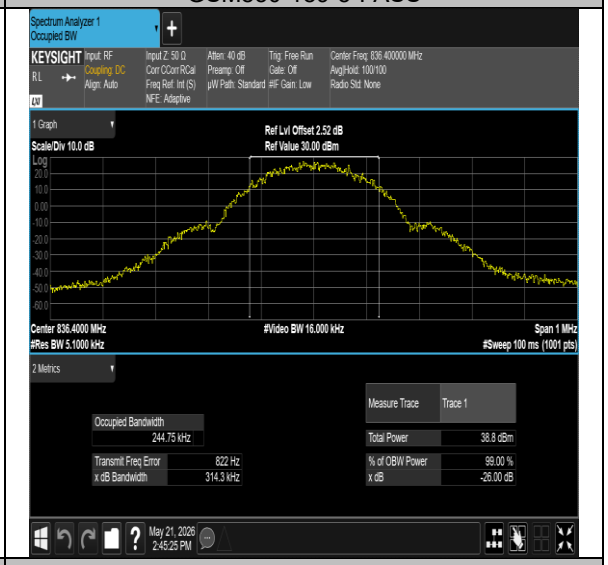
| Band | Channel | Occupied Bandwidth (MHz) | 26dB Bandwidth (MHz) | Limit (MHz) | Verdict |
|---|---|---|---|---|---|
| GSM850 | 128 | 0.24598 | 0.3118 | --- | PASS |
| GSM850 | 189 | 0.24475 | 0.3143 | --- | PASS |
| GSM850 | 251 | 0.24499 | 0.3126 | --- | PASS |

## Test Graphs

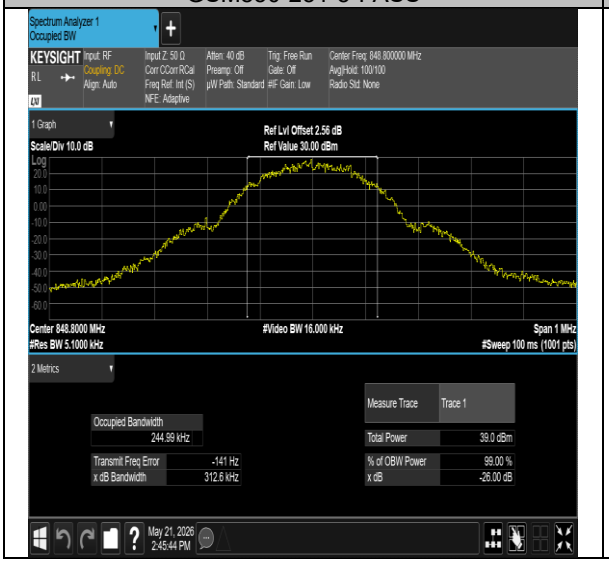
GSM850-128-5-PASS




GSM850-189-5-PASS




GSM850-251-5-PASS

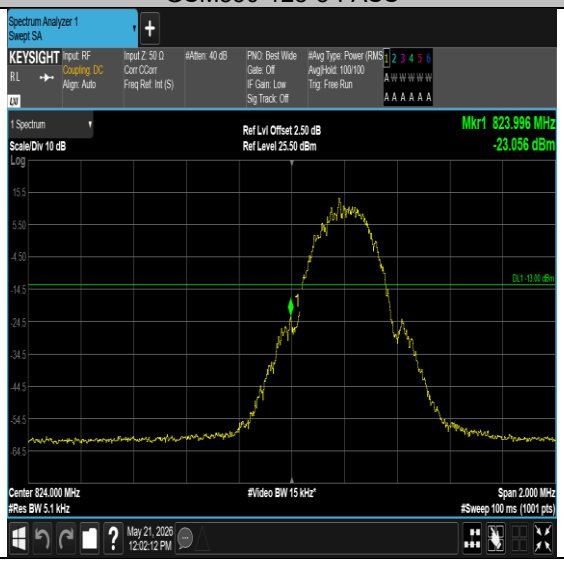
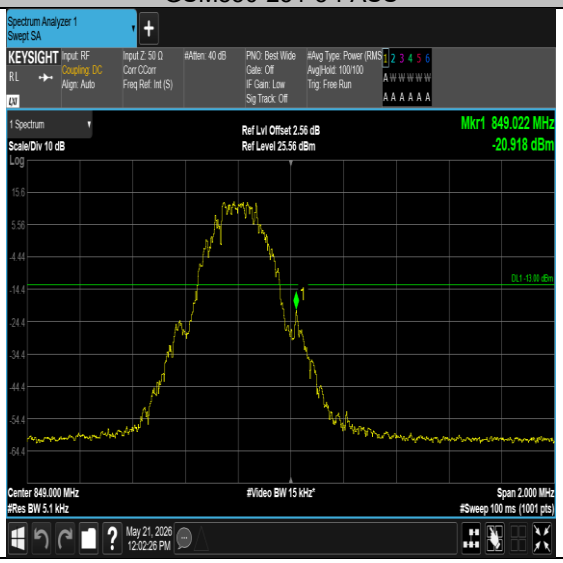


## BAND EDGE

### Test Result

| Band | Channel | Freq (MHz) | Result (dBm) | Limit(dBm) | Verdict |
|---|---|---|---|---|---|
| GSM850 | 128 | 824.00 | -23.06 | -13 | PASS |
| GSM850 | 251 | 849.02 | -20.92 | -13 | PASS |

### Test Graphs

| GSM850-128-5-PASS | GSM850-251-5-PASS |
|---|---|
|  |  |

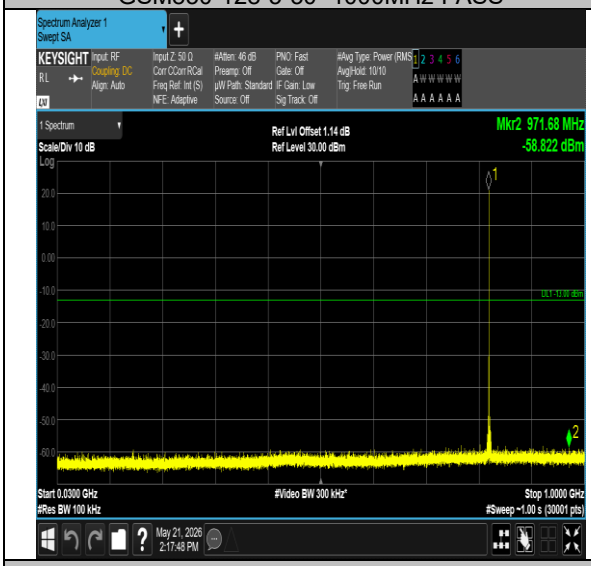
## CONDUCTED SPURIOUS EMISSION

### Test Result

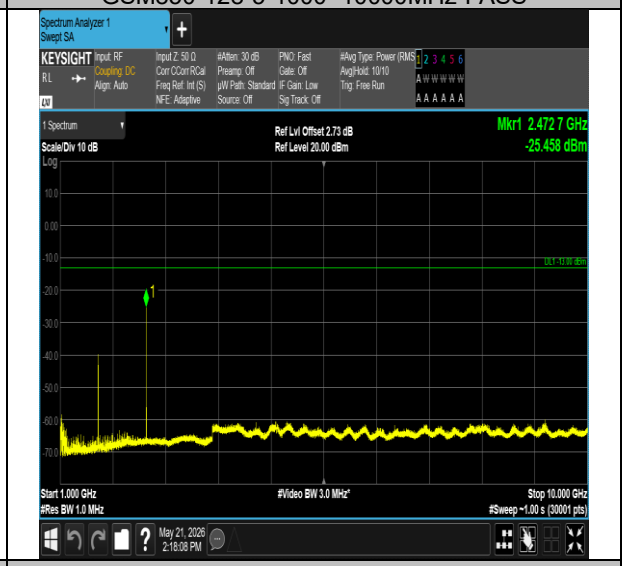
| Band | Channel | Frequency Range(MHz) | Max.Freq. (MHz) | Result (dBm) | Limit (dBm) | Verdict |
|---|---|---|---|---|---|---|
| GSM850 | 128 | 30~1000MHz | 971.68 | -58.82 | -13 | PASS |
| GSM850 | 128 | 1000~10000MHz | 2472.7 | -25.46 | -13 | PASS |
| GSM850 | 189 | 30~1000MHz | 728.21 | -58.94 | -13 | PASS |
| GSM850 | 189 | 1000~10000MHz | 2509.3 | -25.6 | -13 | PASS |
| GSM850 | 251 | 30~1000MHz | 314.73 | -58.22 | -13 | PASS |
| GSM850 | 251 | 1000~10000MHz | 2546.5 | -26 | -13 | PASS |

## Test Graphs

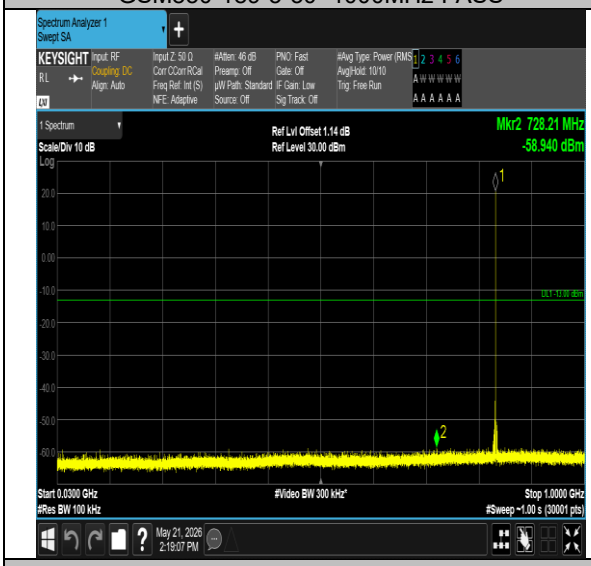
GSM850-128-5-30~1000MHz-PASS



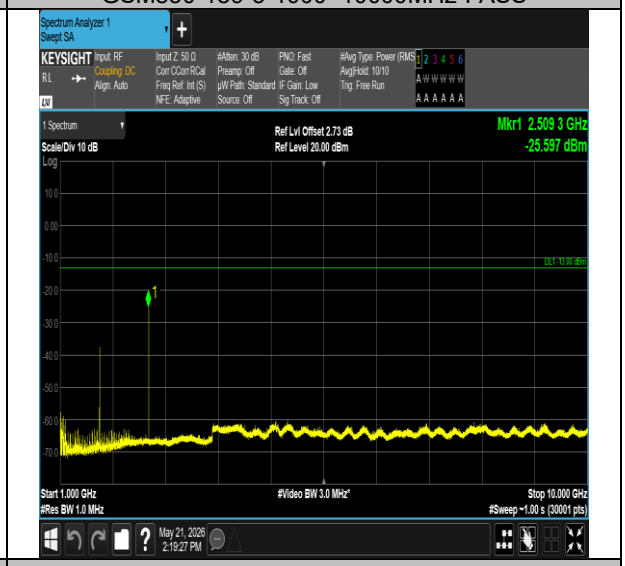

GSM850-128-5-1000~10000MHz-PASS




GSM850-189-5-30~1000MHz-PASS

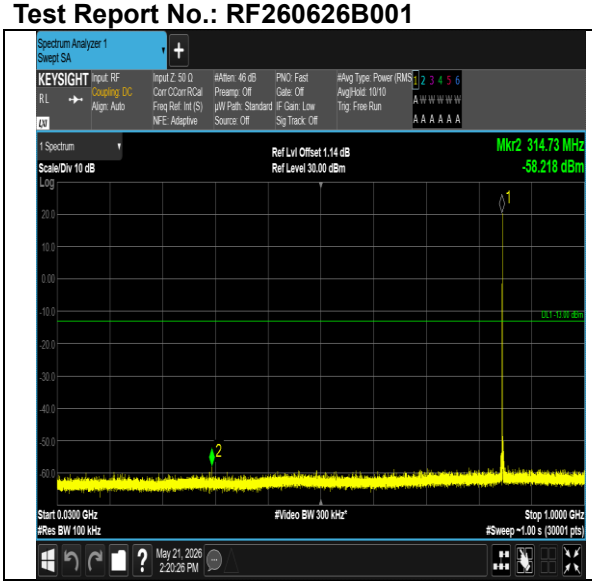


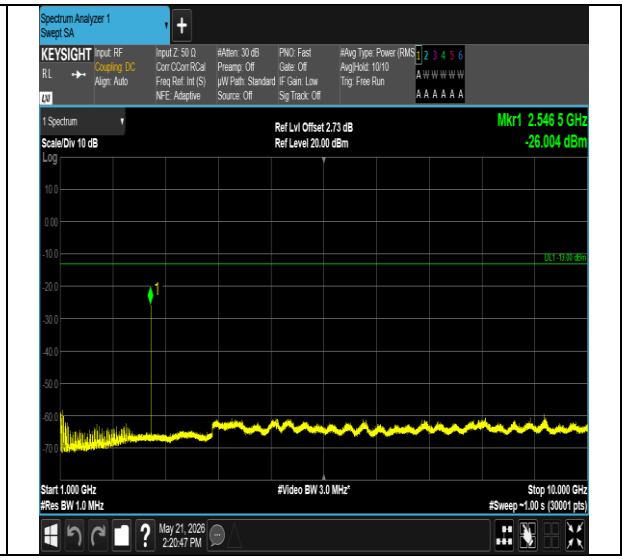

GSM850-189-5-1000~10000MHz-PASS




GSM850-251-5-30~1000MHz-PASS

GSM850-251-5-1000~10000MHz-PASS


Spectrum Analyzer 1
Swept SA
KEYSIGHT
Ref Lvl Offset 1.14 dB
Ref Level 30.00 dBm
Mkr2 314.73 MHz
-58.218 dBm
Scale/Div 10 dB
Log
Start 0.0300 GHz
#Res BW 100 kHz
#Video BW 300 kHz*
Stop 1.0000 GHz
#Sweep ~1.00 s (30001 pts)
May 21, 2026
2:20:26 PM


Spectrum Analyzer 1
Swept SA
KEYSIGHT
Ref Lvl Offset 2.73 dB
Ref Level 20.00 dBm
Mkr1 2.546 5 GHz
-26.004 dBm
Scale/Div 10 dB
Log
Start 1.000 GHz
#Res BW 1.0 MHz
#Video BW 3.0 MHz*
Stop 10.000 GHz
#Sweep ~1.00 s (30001 pts)
May 21, 2026
2:20:47 PM

# FREQUENCY STABILITY

## Test Result

| Voltage | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Band | Channel | Voltage [Vdc] | Temperature (℃) | Deviation (Hz) | Deviation (ppm) | FL (MHz) | FH (MHz) | Limit (MHz) | Verdict |
| GSM850 | 128 | VN | NT | 810 | 0.9828 | 824.078275 | 824.323345 | 824-849 | PASS |
| GSM850 | 128 | VL | NT | -910 | -1.1041 | 824.077035 | 824.321145 | 824-849 | PASS |
| GSM850 | 128 | VH | NT | -10 | -0.0121 | 824.077950 | 824.322030 | 824-849 | PASS |
| GSM850 | 251 | VN | NT | -280 | -0.3299 | 848.678415 | 848.921025 | 824-849 | PASS |
| GSM850 | 251 | VL | NT | -260 | -0.3063 | 848.678100 | 848.921380 | 824-849 | PASS |
| GSM850 | 251 | VH | NT | -290 | -0.3417 | 848.677505 | 848.921915 | 824-849 | PASS |

| Temperature | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Band | Channel | Voltage [Vdc] | Temperature (℃) | Deviation (Hz) | Deviation (ppm) | FL (MHz) | FH (MHz) | Limit (MHz) | Verdict |
| GSM850 | 128 | NV | -30 | 240.00 | 0.2912 | 824.078265 | 824.322215 | 824-849 | PASS |
| GSM850 | 128 | NV | -20 | 330.00 | 0.4004 | 824.07797 | 824.32269 | 824-849 | PASS |
| GSM850 | 128 | NV | -10 | -870.00 | -1.0556 | 824.07735 | 824.32091 | 824-849 | PASS |
| GSM850 | 128 | NV | 0 | -90.00 | -0.1092 | 824.077955 | 824.321865 | 824-849 | PASS |
| GSM850 | 128 | NV | 10 | 440.00 | 0.5339 | 824.07857 | 824.32231 | 824-849 | PASS |
| GSM850 | 128 | NV | 20 | 1200.00 | 1.4560 | 824.079535 | 824.322865 | 824-849 | PASS |
| GSM850 | 128 | NV | 30 | 260.00 | 0.3155 | 824.07813 | 824.32239 | 824-849 | PASS |
| GSM850 | 128 | NV | 40 | -20.00 | -0.0243 | 824.078165 | 824.321795 | 824-849 | PASS |
| GSM850 | 128 | NV | 50 | 1170.00 | 1.4196 | 824.07795 | 824.32439 | 824-849 | PASS |
| GSM850 | 251 | NV | -30 | 540.00 | 0.6552 | 848.679535 | 848.921545 | 824-849 | PASS |
| GSM850 | 251 | NV | -20 | -910.00 | -1.1041 | 848.677085 | 848.921095 | 824-849 | PASS |
| GSM850 | 251 | NV | -10 | -290.00 | -0.3519 | 848.678205 | 848.921215 | 824-849 | PASS |
| GSM850 | 251 | NV | 0 | -340.00 | -0.4125 | 848.678305 | 848.921015 | 824-849 | PASS |
| GSM850 | 251 | NV | 10 | 970.00 | 1.1769 | 848.679135 | 848.922805 | 824-849 | PASS |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| GSM850 | 251 | NV | 20 | -550.00 | -0.6673 | 848.677945 | 848.920955 | 824-849 | PASS |
| GSM850 | 251 | NV | 30 | 70.00 | 0.0849 | 848.67748 | 848.92266 | 824-849 | PASS |
| GSM850 | 251 | NV | 40 | -1280.00 | -1.5530 | 848.67626 | 848.92118 | 824-849 | PASS |
| GSM850 | 251 | NV | 50 | -100.00 | -0.1213 | 848.678355 | 848.921445 | 824-849 | PASS |

## WCDMA B5

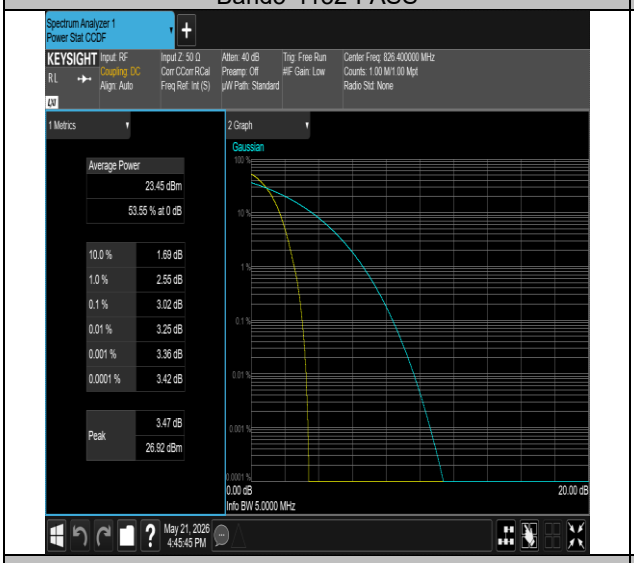
## PEAK-TO-AVERAGE RATIO

### Test Result

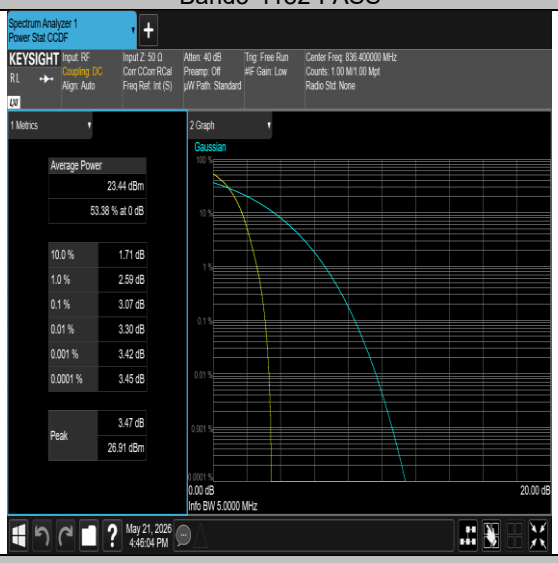
| Band | Channel | Peak-to-Average Ratio(dB) | Limit(dBm) | Verdict |
|---|---|---|---|---|
| Band5 | 4132 | 3.02 | 13 | PASS |
| Band5 | 4182 | 3.07 | 13 | PASS |
| Band5 | 4233 | 3.07 | 13 | PASS |

### Test Graphs

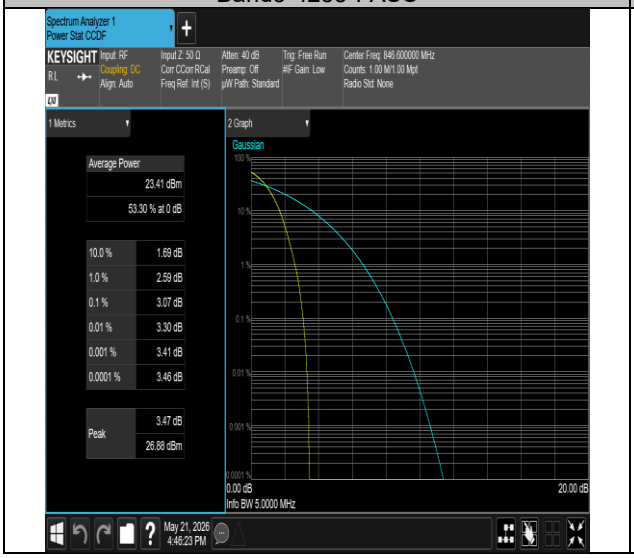
Band5-4132-PASS




Band5-4182-PASS




Band5-4233-PASS



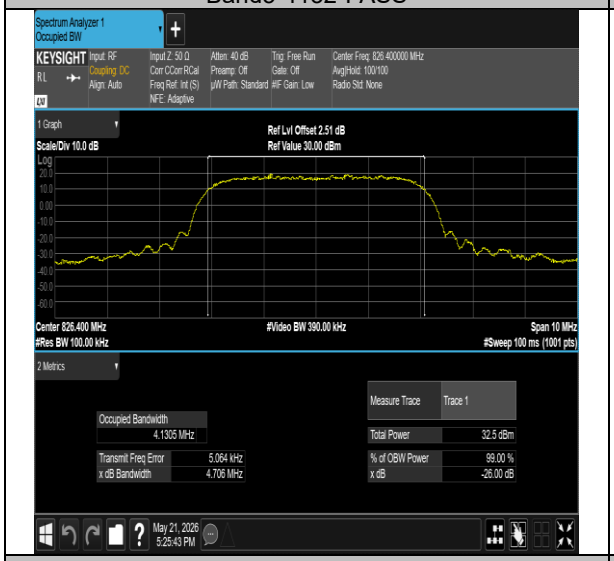
# 26DB BANDWIDTH AND OCCUPIED BANDWIDTH

## Test Result

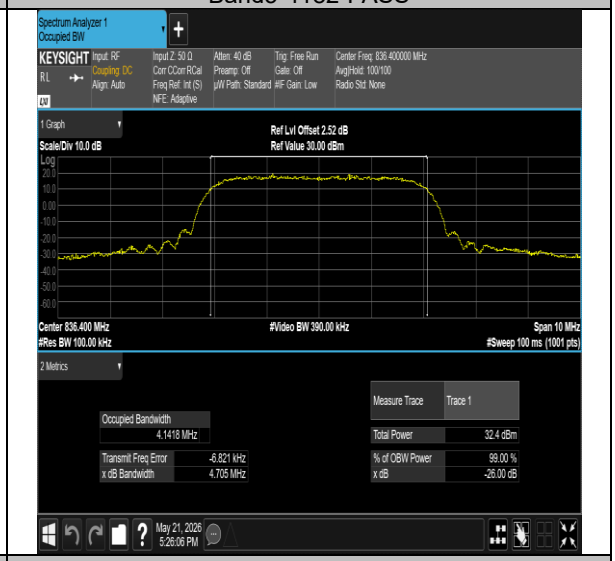
| Band | Channel | Occupied Bandwidth (MHz) | 26dB Bandwidth (MHz) | Limit(kHz) | Verdict |
|---|---|---|---|---|---|
| Band5 | 4132 | 4.1305 | 4.706 | --- | PASS |
| Band5 | 4182 | 4.1418 | 4.705 | --- | PASS |
| Band5 | 4233 | 4.1319 | 4.699 | --- | PASS |

## Test Graphs

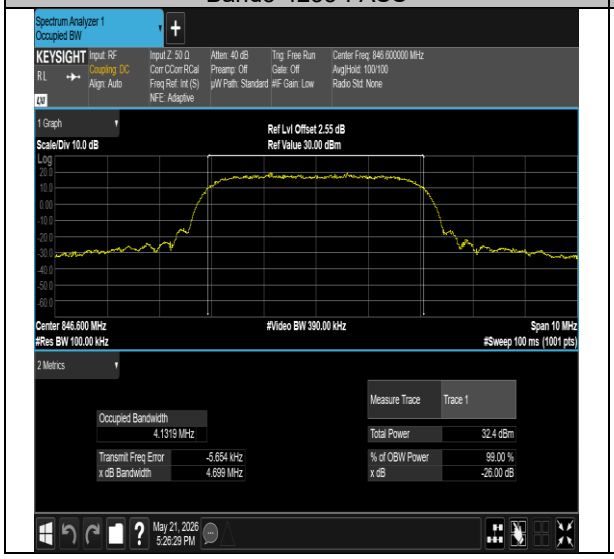
Band5-4132-PASS




Band5-4182-PASS




Band5-4233-PASS

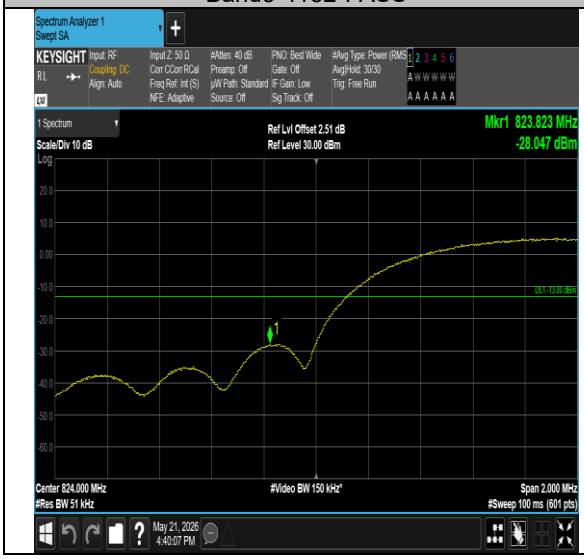


## BAND EDGE

### Test Result

| Band | Channel | Frequency (MHz) | Result (dBm) | Limit(dBm) | Verdict |
|---|---|---|---|---|---|
| Band5 | 4132 | 823.82 | -28.05 | -13 | PASS |
| Band5 | 4233 | 849.16 | -27.72 | -13 | PASS |

### Test Graphs

| Band5-4132-PASS | Band5-4233-PASS |
|---|---|
|  | |

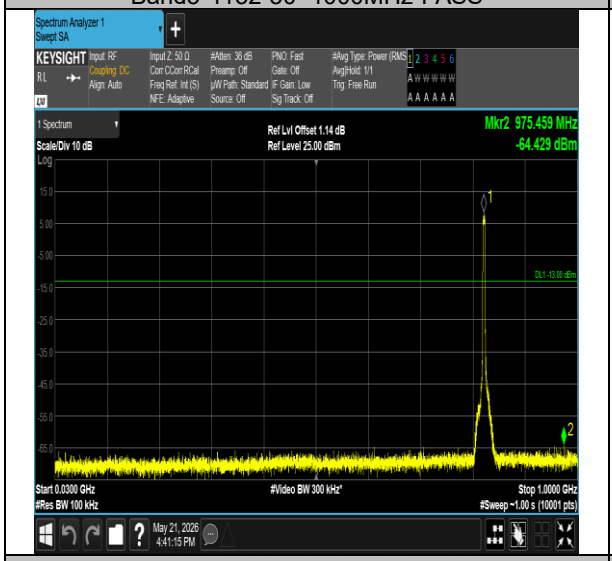
# CONDUCTED SPURIOUS EMISSION

## Test Result

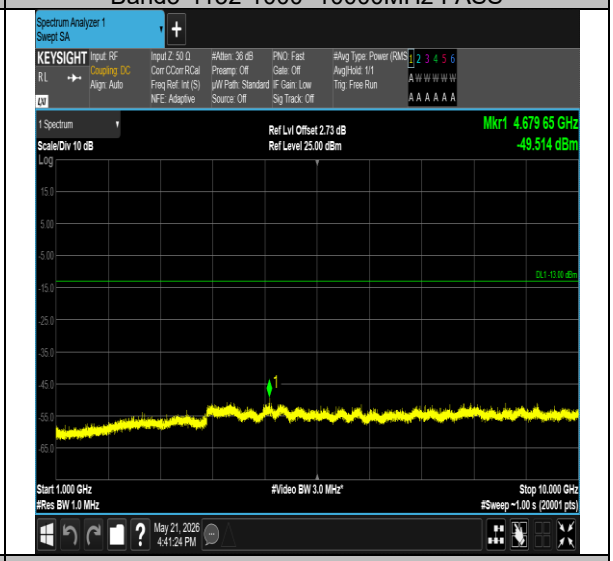
| Band | Channel | Frequency Range (Mhz) | Frequency (dBm) | Result (dBm) | Limit (dBm) | Verdict |
|---|---|---|---|---|---|---|
| Band5 | 4132 | 30~1000MHz | 975.46 | -64.43 | -13 | PASS |
| Band5 | 4132 | 1000~10000MHz | 4679.65 | -49.51 | -13 | PASS |
| Band5 | 4182 | 30~1000MHz | 983.7 | -64.88 | -13 | PASS |
| Band5 | 4182 | 1000~10000MHz | 3659.95 | -50.51 | -13 | PASS |
| Band5 | 4233 | 30~1000MHz | 993.5 | -64.28 | -13 | PASS |
| Band5 | 4233 | 1000~10000MHz | 4685.05 | -50.97 | -13 | PASS |

## Test Graphs

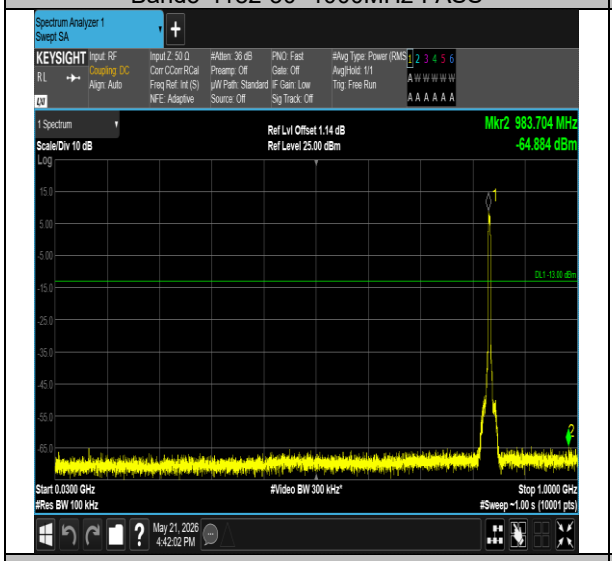
Band5-4132-30~1000MHz-PASS



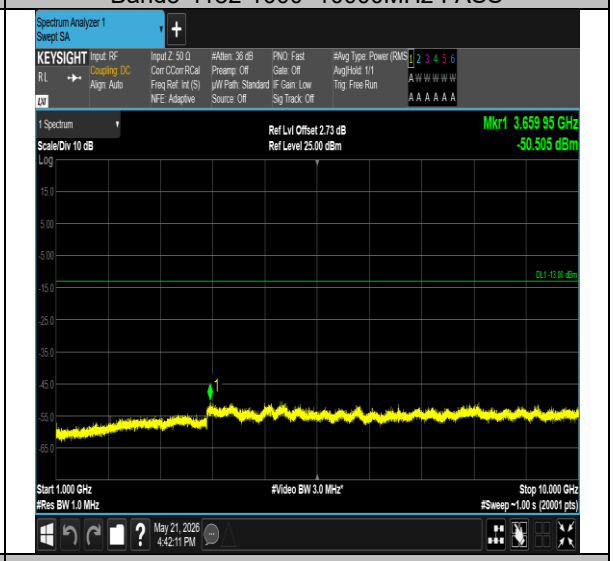

Band5-4132-1000~10000MHz-PASS




Band5-4182-30~1000MHz-PASS

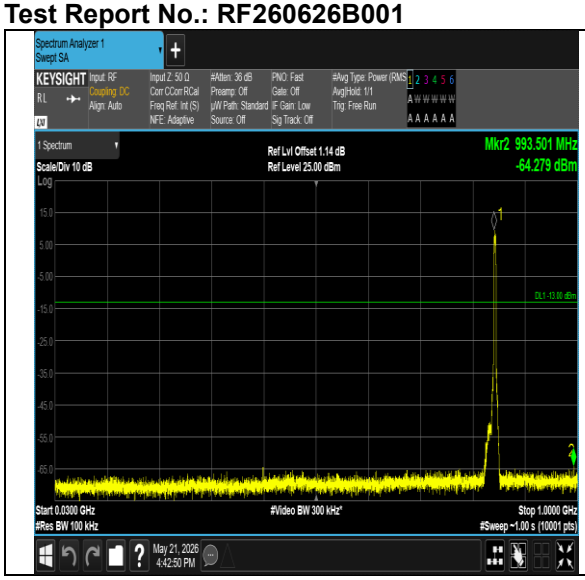


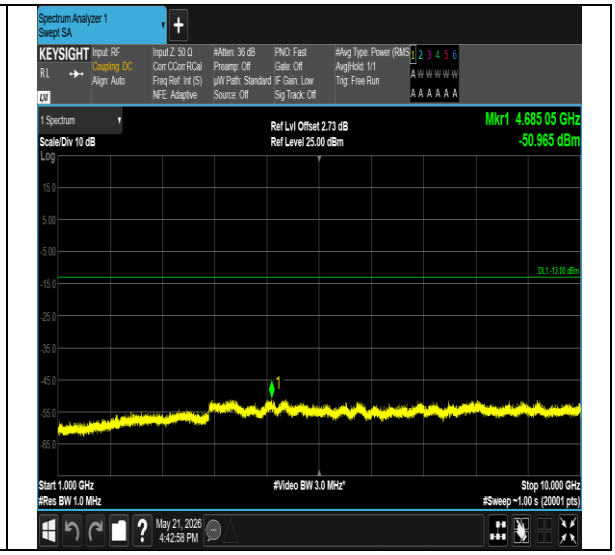

Band5-4182-1000~10000MHz-PASS




Band5-4233-30~1000MHz-PASS

Band5-4233-1000~10000MHz-PASS


Spectrum Analyzer 1
Swept SA
KEYSIGHT
Ref Lvl Offset 1.14 dB
Ref Level 25.00 dBm
Mkr2 993.501 MHz
-64.279 dBm
Scale/Div 10 dB
Start 0.0300 GHz
#Res BW 100 kHz
#Video BW 300 kHz*
Stop 1.0000 GHz
#Sweep ~1.00 s (10001 pts)
May 21, 2026
4:42:50 PM


Spectrum Analyzer 1
Swept SA
KEYSIGHT
Ref Lvl Offset 2.73 dB
Ref Level 25.00 dBm
Mkr1 4.685 05 GHz
-50.965 dBm
Scale/Div 10 dB
Start 1.000 GHz
#Res BW 1.0 MHz
#Video BW 3.0 MHz*
Stop 10.000 GHz
#Sweep ~1.00 s (20001 pts)
May 21, 2026
4:42:58 PM

# FREQUENCY STABILITY

## Test Result

| Voltage | | | | | | | |
|---|---|---|---|---|---|---|---|
| Band | Channel | Voltage (Vdc) | Temperature (℃) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Verdict |
| Band5 | 4132 | VN | NT | 1.34 | 0.001621 | ±2.5 | PASS |
| Band5 | 4132 | VL | NT | 1.08 | 0.001307 | ±2.5 | PASS |
| Band5 | 4132 | VH | NT | 1.01 | 0.001222 | ±2.5 | PASS |
| Band5 | 4233 | VN | NT | -1.53 | -0.001807 | ±2.5 | PASS |
| Band5 | 4233 | VL | NT | -1.70 | -0.002008 | ±2.5 | PASS |
| Band5 | 4233 | VH | NT | -1.77 | -0.002091 | ±2.5 | PASS |

| Temperature | | | | | | | |
|---|---|---|---|---|---|---|---|
| Band | Channel | Voltage (Vdc) | Temperature (℃) | Deviation (Hz) | Deviation (ppm) | Limit (ppm) | Verdict |
| Band5 | 4132 | NV | -30 | 1.21 | 0.001464 | ±2.5 | PASS |
| Band5 | 4132 | NV | -20 | 0.97 | 0.001174 | ±2.5 | PASS |
| Band5 | 4132 | NV | -10 | 1.14 | 0.001379 | ±2.5 | PASS |
| Band5 | 4132 | NV | 0 | 0.96 | 0.001162 | ±2.5 | PASS |
| Band5 | 4132 | NV | 10 | 1.08 | 0.001307 | ±2.5 | PASS |
| Band5 | 4132 | NV | 20 | 1.14 | 0.001379 | ±2.5 | PASS |
| Band5 | 4132 | NV | 30 | 1.11 | 0.001343 | ±2.5 | PASS |
| Band5 | 4132 | NV | 40 | 1.11 | 0.001343 | ±2.5 | PASS |
| Band5 | 4132 | NV | 50 | 1.06 | 0.001283 | ±2.5 | PASS |
| Band5 | 4233 | NV | -30 | -1.66 | -0.001961 | ±2.5 | PASS |
| Band5 | 4233 | NV | -20 | -1.61 | -0.001902 | ±2.5 | PASS |
| Band5 | 4233 | NV | -10 | -1.64 | -0.001937 | ±2.5 | PASS |
| Band5 | 4233 | NV | 0 | -1.69 | -0.001996 | ±2.5 | PASS |
| Band5 | 4233 | NV | 10 | -1.77 | -0.002091 | ±2.5 | PASS |
| Band5 | 4233 | NV | 20 | -1.79 | -0.002114 | ±2.5 | PASS |
| Band5 | 4233 | NV | 30 | -1.62 | -0.001914 | ±2.5 | PASS |
| Band5 | 4233 | NV | 40 | -1.59 | -0.001878 | ±2.5 | PASS |
| Band5 | 4233 | NV | 50 | -1.78 | -0.002103 | ±2.5 | PASS |

## LTE B5

## PEAK-TO-AVERAGE RATIO(CCDF)

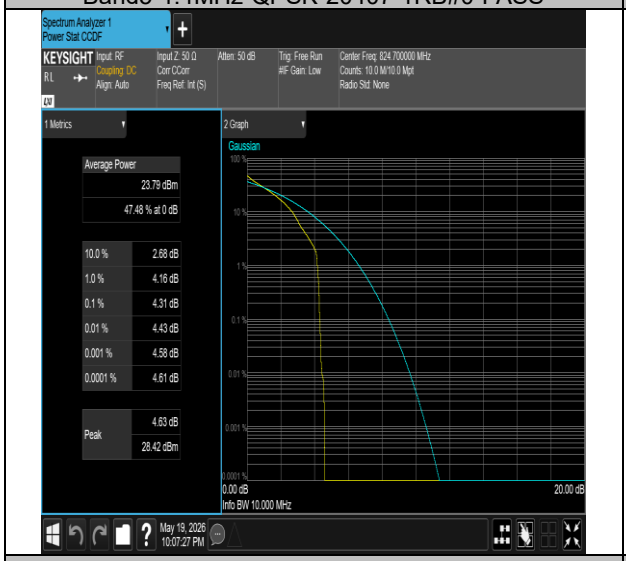
## Test Result

| Band | Bandwidth | Modulation | Channel | RB Configuration | Result(dB) | Limit(dB) | Verdict |
|---|---|---|---|---|---|---|---|
| Band5 | 1.4MHz | QPSK | 20407 | 1RB#0 | 4.31 | 13 | PASS |
| Band5 | 1.4MHz | QPSK | 20407 | 6RB#0 | 5.02 | 13 | PASS |
| Band5 | 1.4MHz | QPSK | 20525 | 1RB#0 | 3.71 | 13 | PASS |
| Band5 | 1.4MHz | QPSK | 20525 | 6RB#0 | 4.35 | 13 | PASS |
| Band5 | 1.4MHz | QPSK | 20643 | 1RB#0 | 3.90 | 13 | PASS |
| Band5 | 1.4MHz | QPSK | 20643 | 6RB#0 | 4.72 | 13 | PASS |
| Band5 | 1.4MHz | 64QAM | 20407 | 1RB#0 | 6.19 | 13 | PASS |
| Band5 | 1.4MHz | 64QAM | 20407 | 6RB#0 | 6.59 | 13 | PASS |
| Band5 | 1.4MHz | 64QAM | 20525 | 1RB#0 | 5.52 | 13 | PASS |
| Band5 | 1.4MHz | 64QAM | 20525 | 6RB#0 | 6.02 | 13 | PASS |
| Band5 | 1.4MHz | 64QAM | 20643 | 1RB#0 | 5.71 | 13 | PASS |
| Band5 | 1.4MHz | 64QAM | 20643 | 6RB#0 | 6.34 | 13 | PASS |
| Band5 | 1.4MHz | 16QAM | 20407 | 1RB#0 | 5.26 | 13 | PASS |
| Band5 | 1.4MHz | 16QAM | 20407 | 6RB#0 | 5.98 | 13 | PASS |
| Band5 | 1.4MHz | 16QAM | 20525 | 1RB#0 | 4.60 | 13 | PASS |
| Band5 | 1.4MHz | 16QAM | 20525 | 6RB#0 | 5.31 | 13 | PASS |
| Band5 | 1.4MHz | 16QAM | 20643 | 1RB#0 | 4.94 | 13 | PASS |
| Band5 | 1.4MHz | 16QAM | 20643 | 6RB#0 | 5.68 | 13 | PASS |
| Band5 | 3MHz | QPSK | 20415 | 1RB#0 | 4.23 | 13 | PASS |
| Band5 | 3MHz | QPSK | 20415 | 15RB#0 | 4.99 | 13 | PASS |
| Band5 | 3MHz | QPSK | 20525 | 1RB#0 | 3.61 | 13 | PASS |
| Band5 | 3MHz | QPSK | 20525 | 15RB#0 | 4.40 | 13 | PASS |
| Band5 | 3MHz | QPSK | 20635 | 1RB#0 | 4.06 | 13 | PASS |
| Band5 | 3MHz | QPSK | 20635 | 15RB#0 | 4.83 | 13 | PASS |
| Band5 | 3MHz | 64QAM | 20415 | 1RB#0 | 6.17 | 13 | PASS |
| Band5 | 3MHz | 64QAM | 20415 | 15RB#0 | 6.52 | 13 | PASS |
| Band5 | 3MHz | 64QAM | 20525 | 1RB#0 | 5.07 | 13 | PASS |
| Band5 | 3MHz | 64QAM | 20525 | 15RB#0 | 6.06 | 13 | PASS |
| Band5 | 3MHz | 64QAM | 20635 | 1RB#0 | 5.93 | 13 | PASS |
| Band5 | 3MHz | 64QAM | 20635 | 15RB#0 | 6.40 | 13 | PASS |
| Band5 | 3MHz | 16QAM | 20415 | 1RB#0 | 5.29 | 13 | PASS |
| Band5 | 3MHz | 16QAM | 20415 | 15RB#0 | 5.93 | 13 | PASS |
| Band5 | 3MHz | 16QAM | 20525 | 1RB#0 | 4.50 | 13 | PASS |
| Band5 | 3MHz | 16QAM | 20525 | 15RB#0 | 5.34 | 13 | PASS |
| Band5 | 3MHz | 16QAM | 20635 | 1RB#0 | 4.99 | 13 | PASS |
| Band5 | 3MHz | 16QAM | 20635 | 15RB#0 | 5.78 | 13 | PASS |
| Band5 | 5MHz | QPSK | 20425 | 1RB#0 | 3.45 | 13 | PASS |
| Band5 | 5MHz | QPSK | 20425 | 25RB#0 | 4.25 | 13 | PASS |
| Band5 | 5MHz | QPSK | 20525 | 1RB#0 | 2.99 | 13 | PASS |
| Band5 | 5MHz | QPSK | 20525 | 25RB#0 | 4.02 | 13 | PASS |
| Band5 | 5MHz | QPSK | 20625 | 1RB#0 | 3.51 | 13 | PASS |
| Band5 | 5MHz | QPSK | 20625 | 25RB#0 | 4.35 | 13 | PASS |
| Band5 | 5MHz | 64QAM | 20425 | 1RB#0 | 6.09 | 13 | PASS |

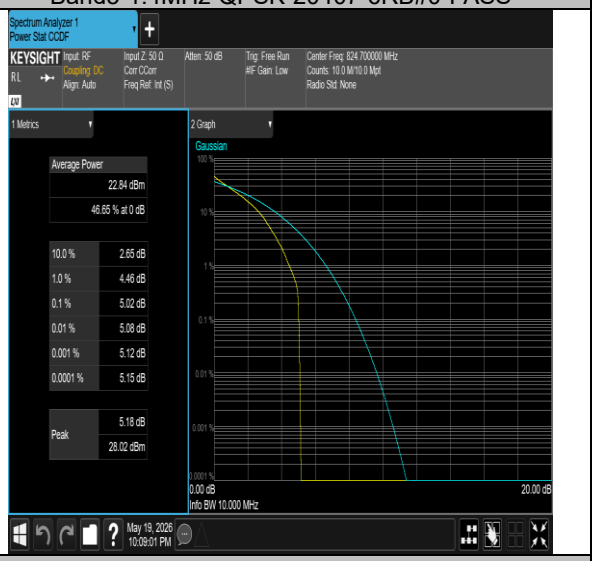
| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Band5 | 5MHz | 64QAM | 20425 | 25RB#0 | 6.42 | 13 | PASS |
| Band5 | 5MHz | 64QAM | 20525 | 1RB#0 | 4.93 | 13 | PASS |
| Band5 | 5MHz | 64QAM | 20525 | 25RB#0 | 6.08 | 13 | PASS |
| Band5 | 5MHz | 64QAM | 20625 | 1RB#0 | 6.24 | 13 | PASS |
| Band5 | 5MHz | 64QAM | 20625 | 25RB#0 | 6.49 | 13 | PASS |
| Band5 | 5MHz | 16QAM | 20425 | 1RB#0 | 4.49 | 13 | PASS |
| Band5 | 5MHz | 16QAM | 20425 | 25RB#0 | 5.23 | 13 | PASS |
| Band5 | 5MHz | 16QAM | 20525 | 1RB#0 | 3.92 | 13 | PASS |
| Band5 | 5MHz | 16QAM | 20525 | 25RB#0 | 4.97 | 13 | PASS |
| Band5 | 5MHz | 16QAM | 20625 | 1RB#0 | 4.46 | 13 | PASS |
| Band5 | 5MHz | 16QAM | 20625 | 25RB#0 | 5.31 | 13 | PASS |
| Band5 | 10MHz | QPSK | 20450 | 1RB#0 | 3.63 | 13 | PASS |
| Band5 | 10MHz | QPSK | 20450 | 50RB#0 | 4.15 | 13 | PASS |
| Band5 | 10MHz | QPSK | 20525 | 1RB#0 | 2.89 | 13 | PASS |
| Band5 | 10MHz | QPSK | 20525 | 50RB#0 | 4.26 | 13 | PASS |
| Band5 | 10MHz | QPSK | 20600 | 1RB#0 | 3.55 | 13 | PASS |
| Band5 | 10MHz | QPSK | 20600 | 50RB#0 | 4.46 | 13 | PASS |
| Band5 | 10MHz | 64QAM | 20450 | 1RB#0 | 6.18 | 13 | PASS |
| Band5 | 10MHz | 64QAM | 20450 | 50RB#0 | 6.26 | 13 | PASS |
| Band5 | 10MHz | 64QAM | 20525 | 1RB#0 | 5.00 | 13 | PASS |
| Band5 | 10MHz | 64QAM | 20525 | 50RB#0 | 6.30 | 13 | PASS |
| Band5 | 10MHz | 64QAM | 20600 | 1RB#0 | 6.10 | 13 | PASS |
| Band5 | 10MHz | 64QAM | 20600 | 50RB#0 | 6.70 | 13 | PASS |
| Band5 | 10MHz | 16QAM | 20450 | 1RB#0 | 4.51 | 13 | PASS |
| Band5 | 10MHz | 16QAM | 20450 | 50RB#0 | 5.08 | 13 | PASS |
| Band5 | 10MHz | 16QAM | 20525 | 1RB#0 | 3.75 | 13 | PASS |
| Band5 | 10MHz | 16QAM | 20525 | 50RB#0 | 5.13 | 13 | PASS |
| Band5 | 10MHz | 16QAM | 20600 | 1RB#0 | 4.45 | 13 | PASS |
| Band5 | 10MHz | 16QAM | 20600 | 50RB#0 | 5.47 | 13 | PASS |

## Test Graphs

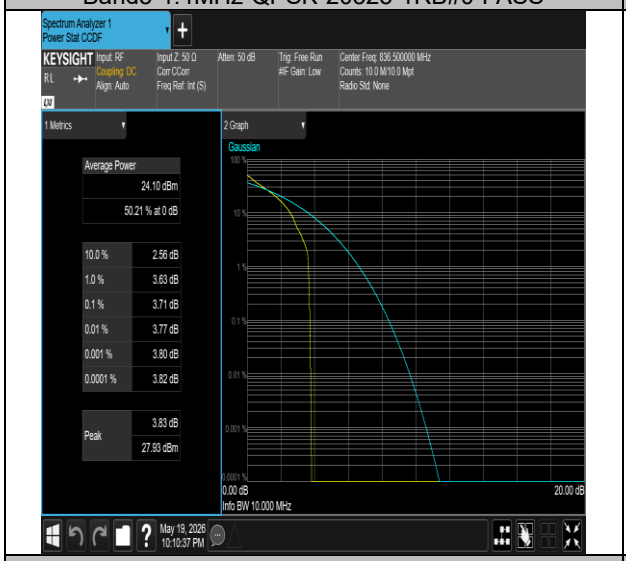
Band5-1.4MHz-QPSK-20407-1RB#0-PASS




Band5-1.4MHz-QPSK-20407-6RB#0-PASS




Band5-1.4MHz-QPSK-20525-1RB#0-PASS

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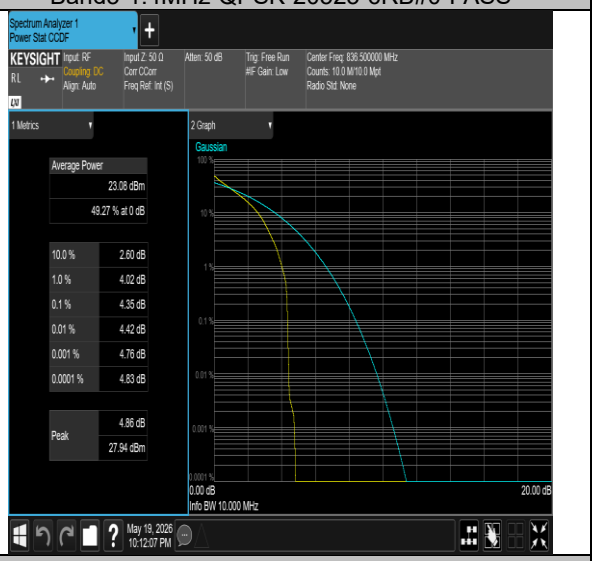
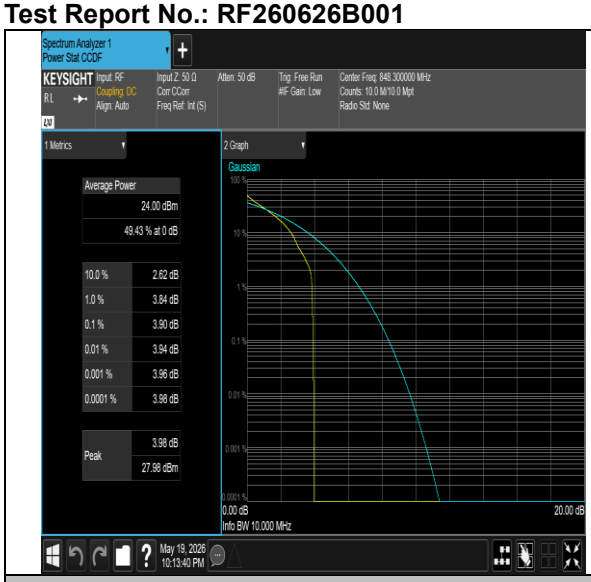



Band5-1.4MHz-QPSK-20643-1RB#0-PASS

Band5-1.4MHz-QPSK-20643-6RB#0-PASS

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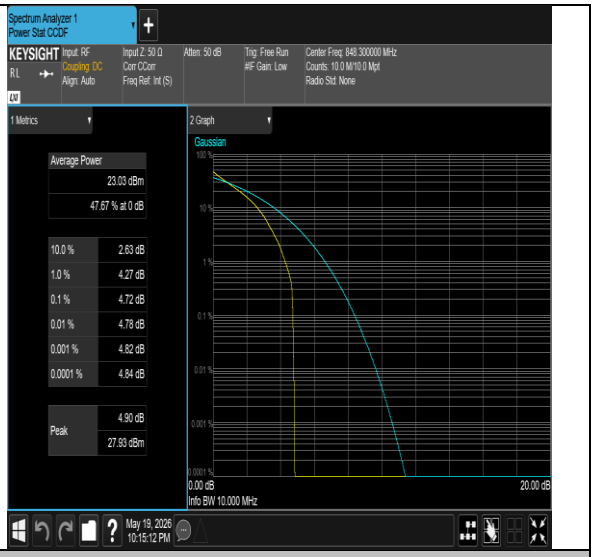


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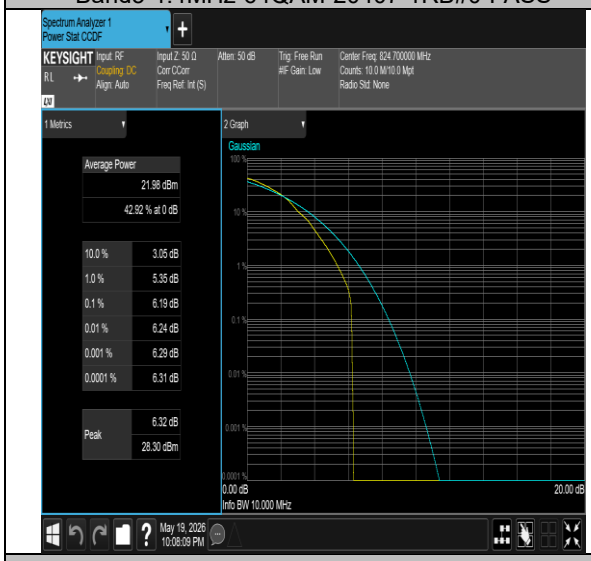


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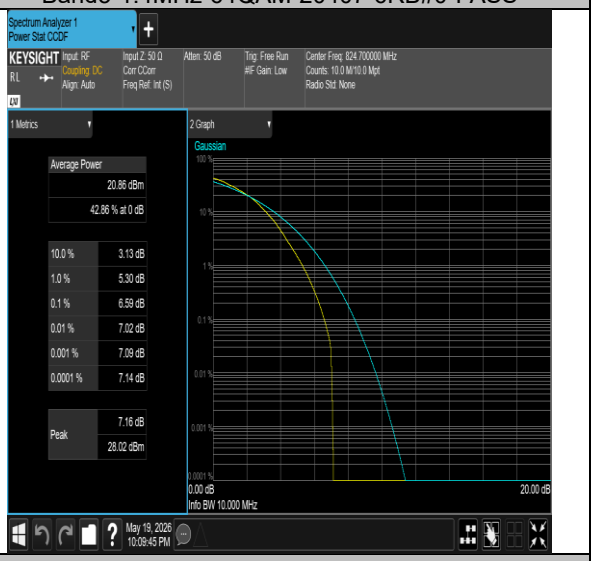


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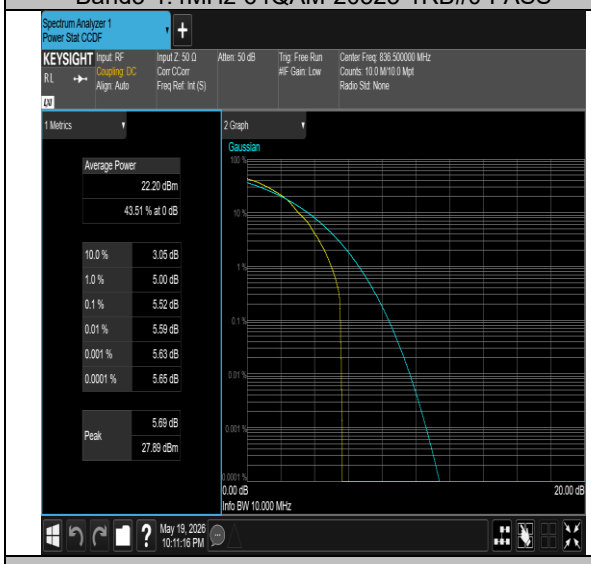


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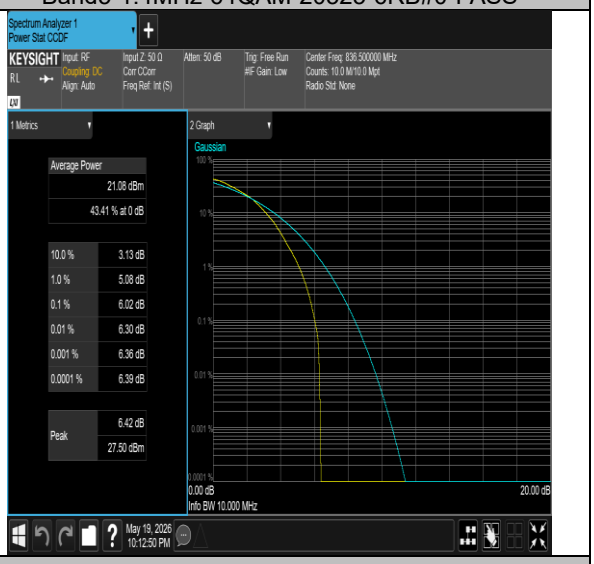


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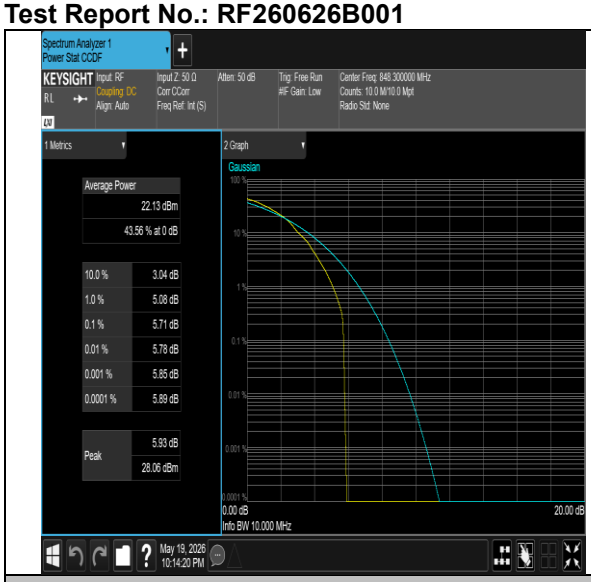
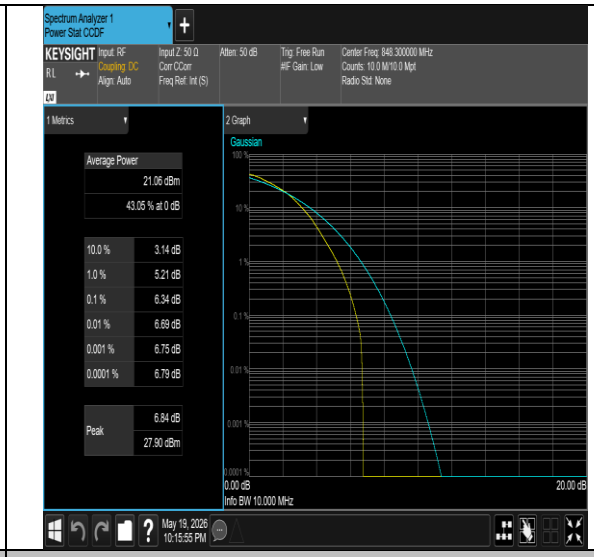



Band5-1.4MHz-16QAM-20407-1RB#0-PASS

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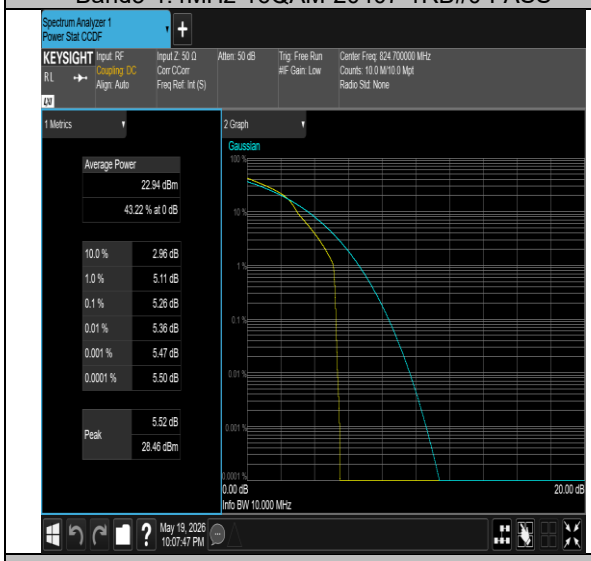
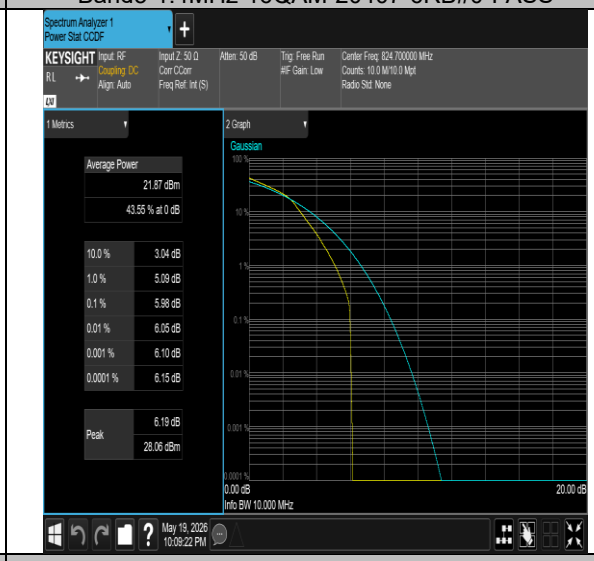
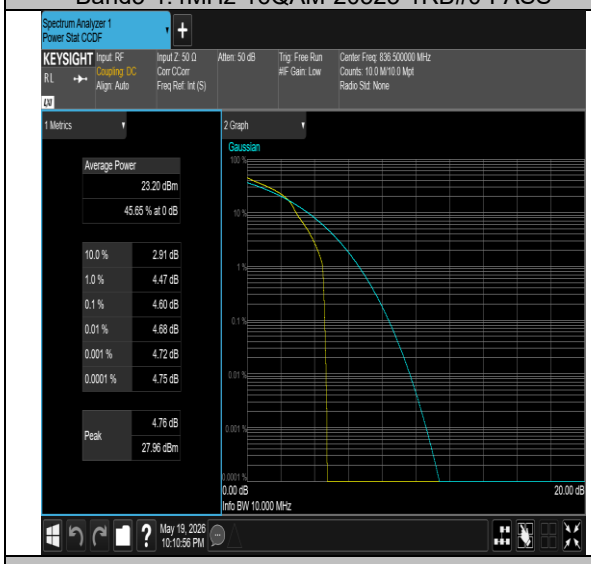



Band5-1.4MHz-16QAM-20525-1RB#0-PASS




Band5-1.4MHz-16QAM-20525-6RB#0-PASS

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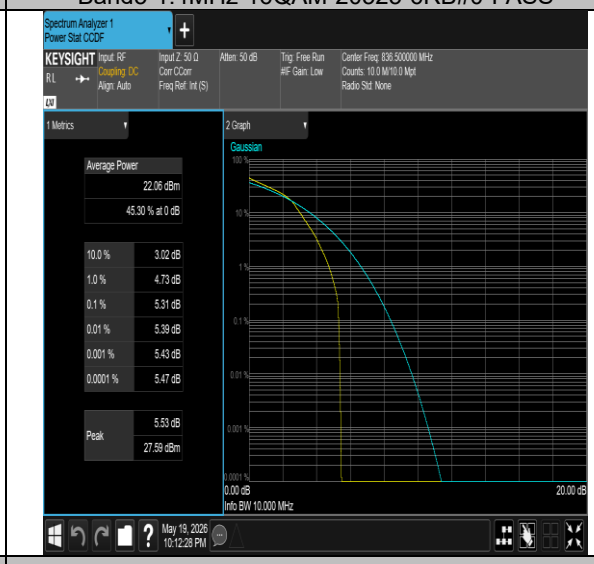
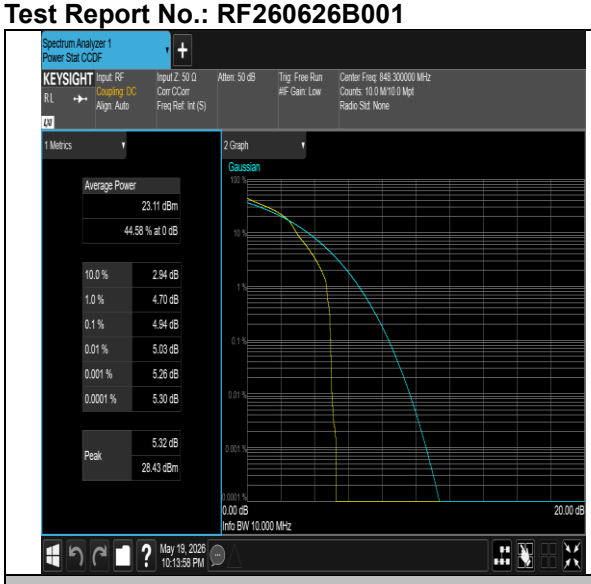
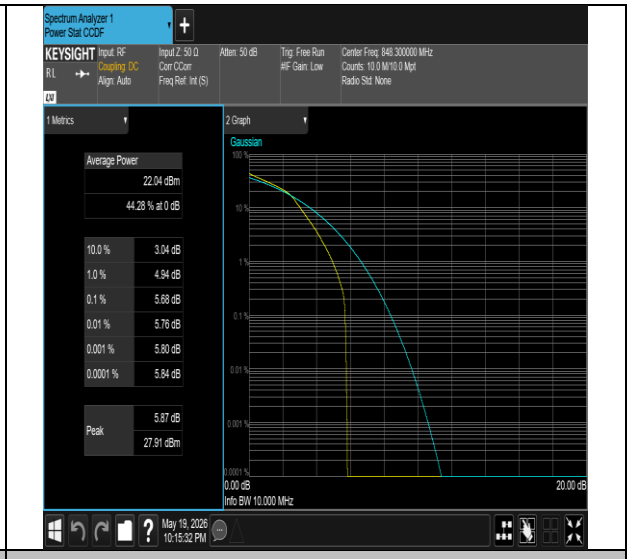



Band5-1.4MHz-16QAM-20643-6RB#0-PASS




Band5-3MHz-QPSK-20415-1RB#0-PASS

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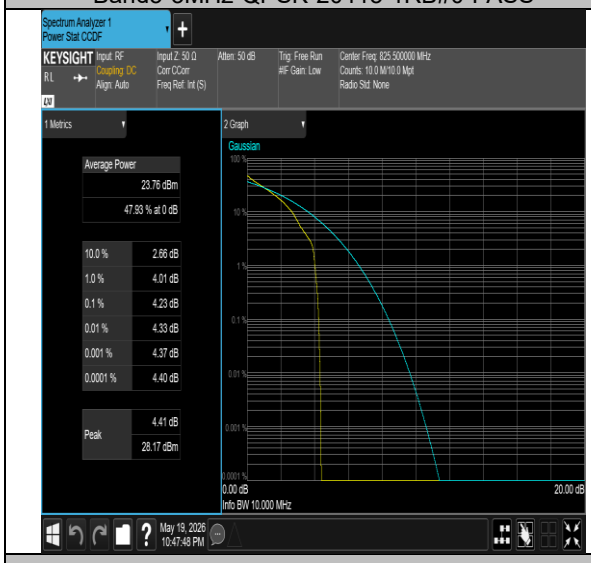


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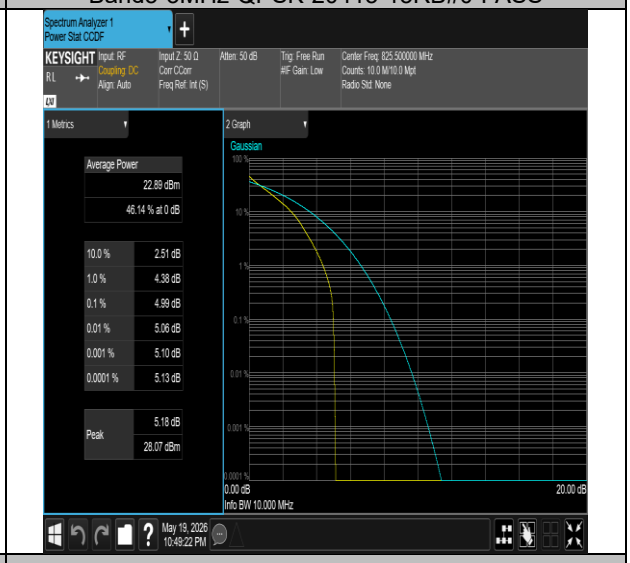


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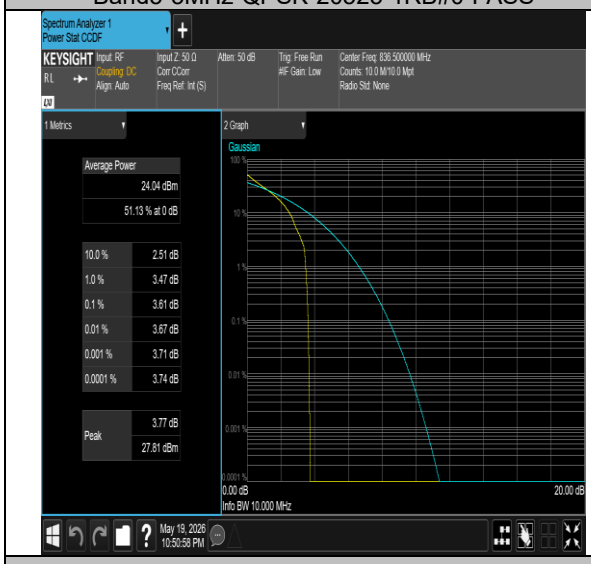


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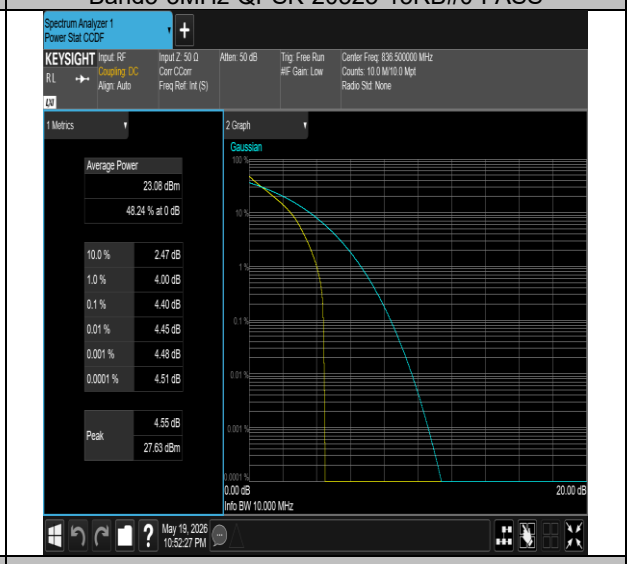


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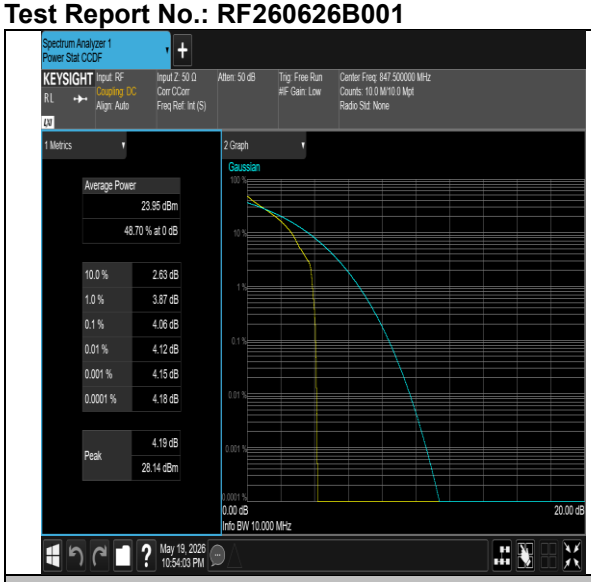


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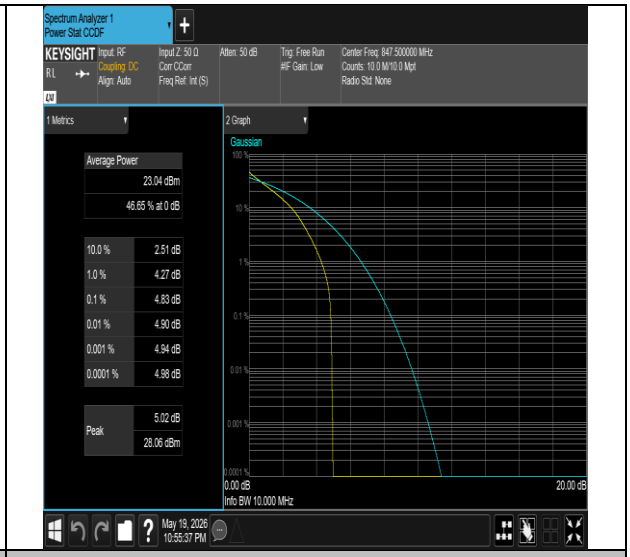


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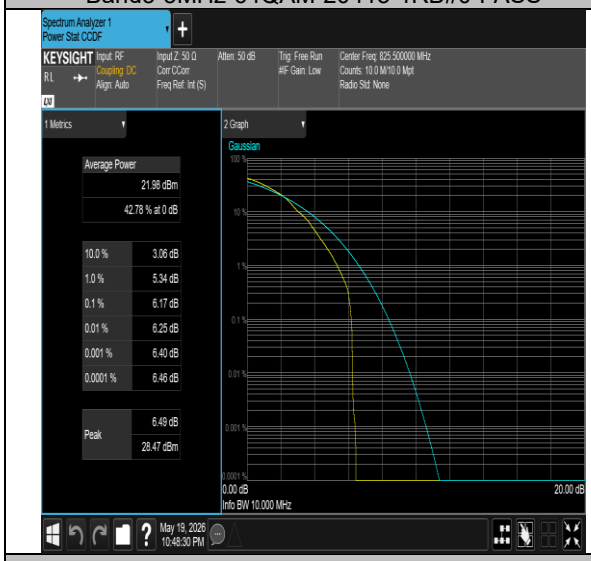


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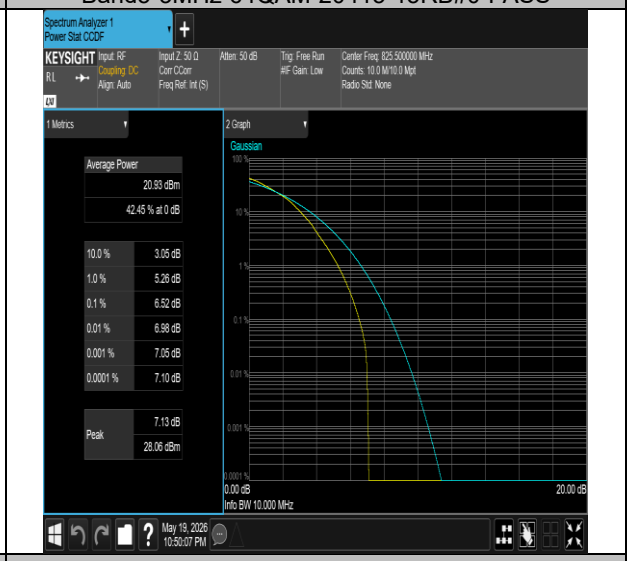
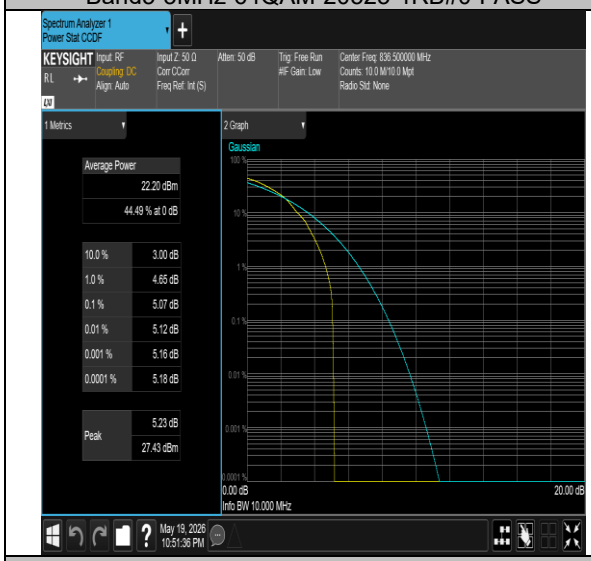
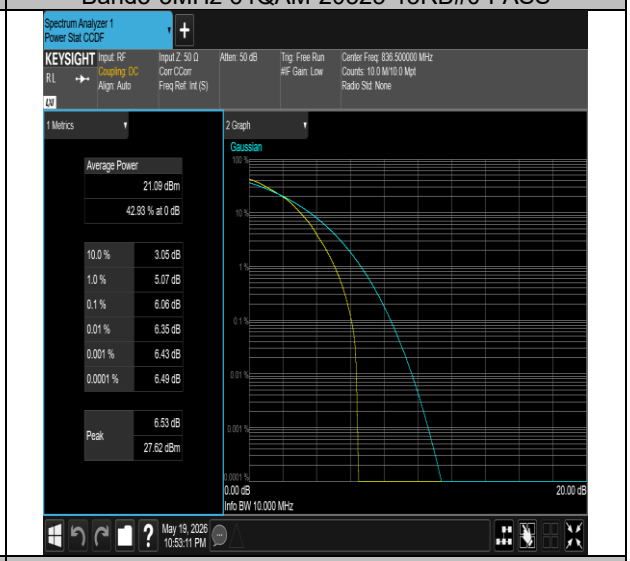


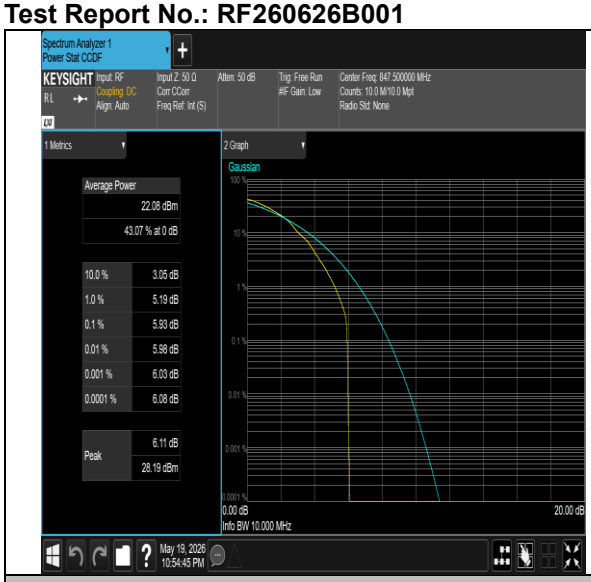

Band5-3MHz-64QAM-20525-15RB#0-PASS




Band5-3MHz-64QAM-20635-1RB#0-PASS




Band5-3MHz-64QAM-20635-15RB#0-PASS

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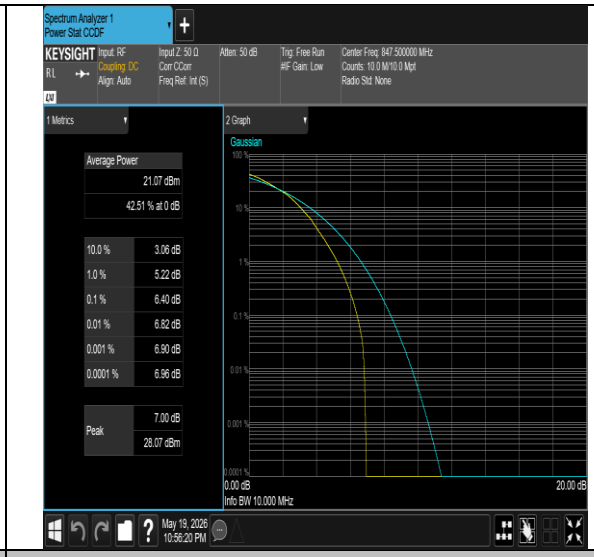


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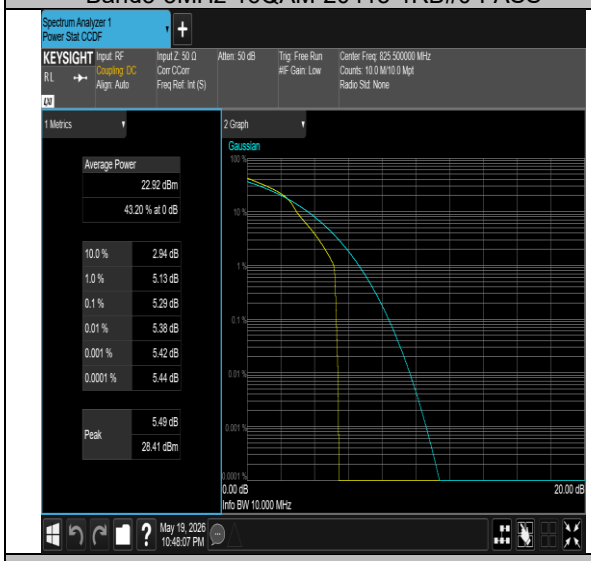


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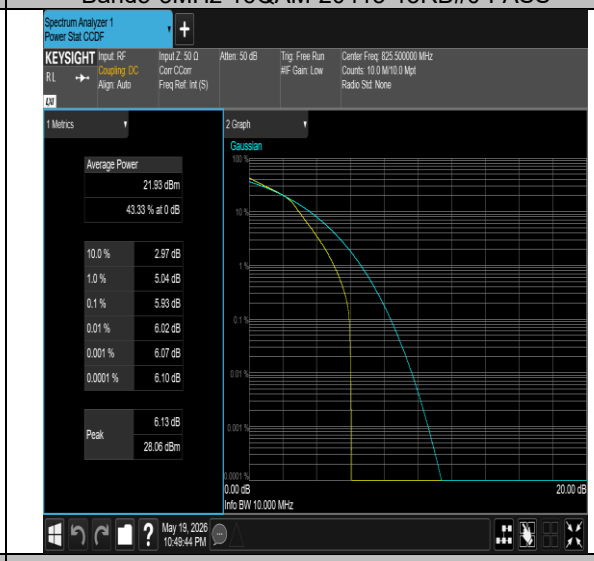


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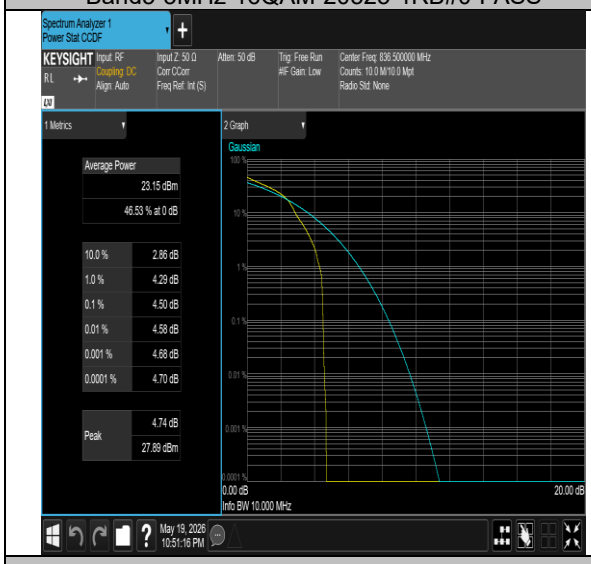


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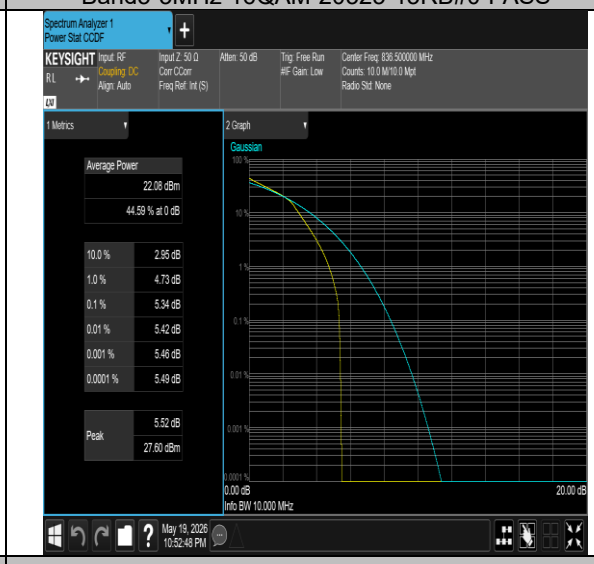


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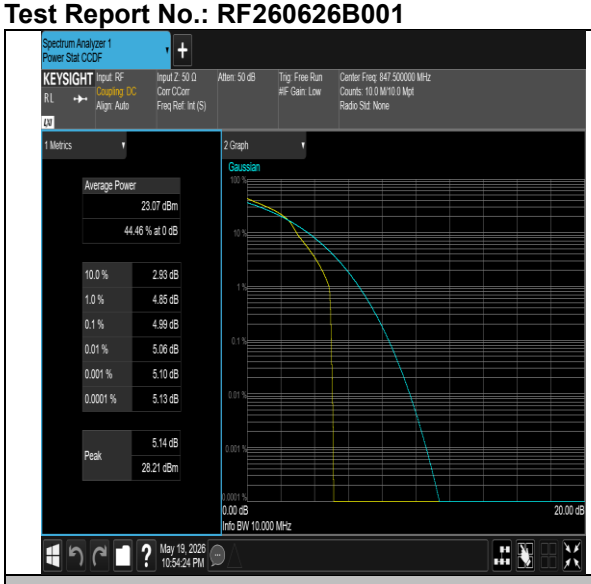
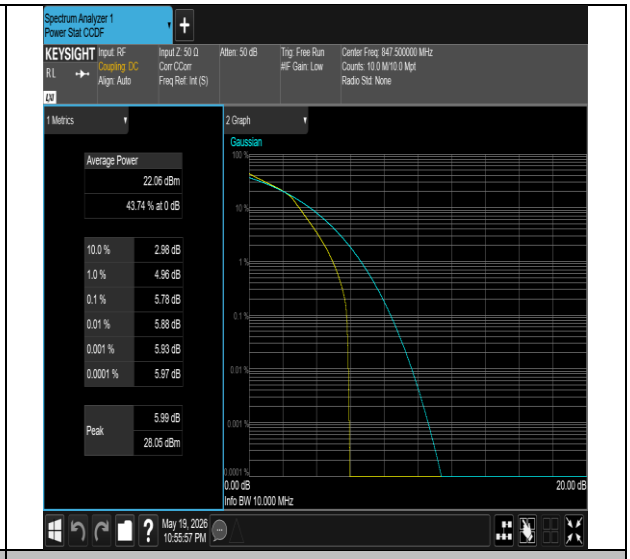



Band5-5MHz-QPSK-20425-1RB#0-PASS

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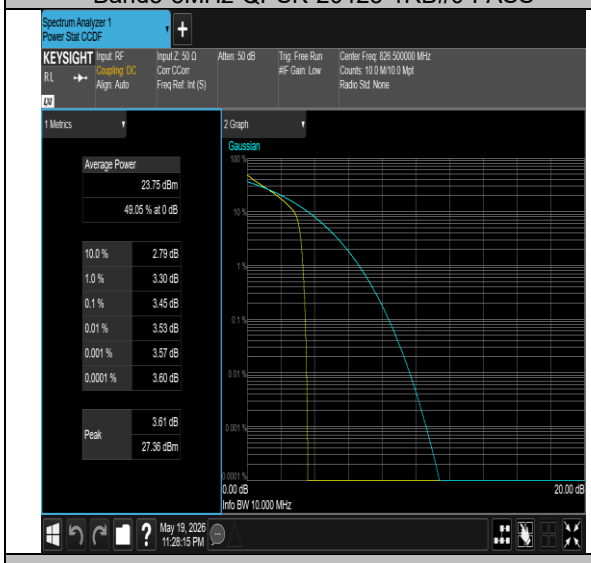


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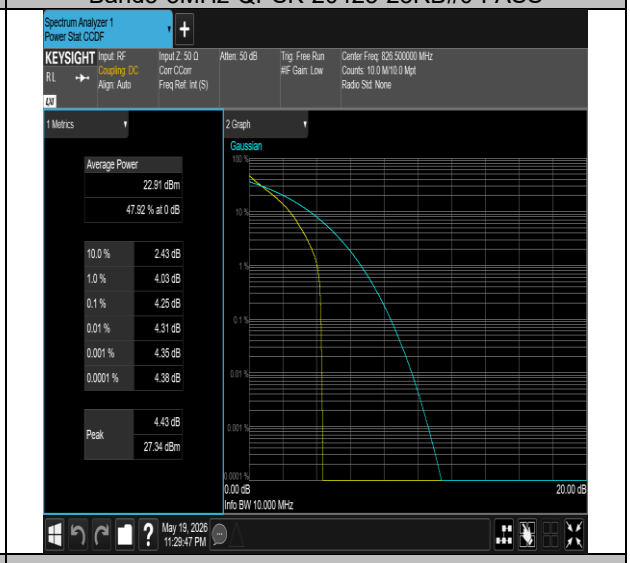


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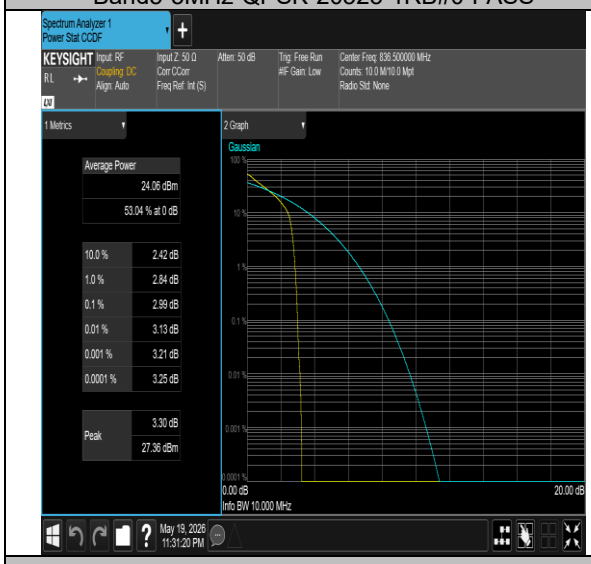


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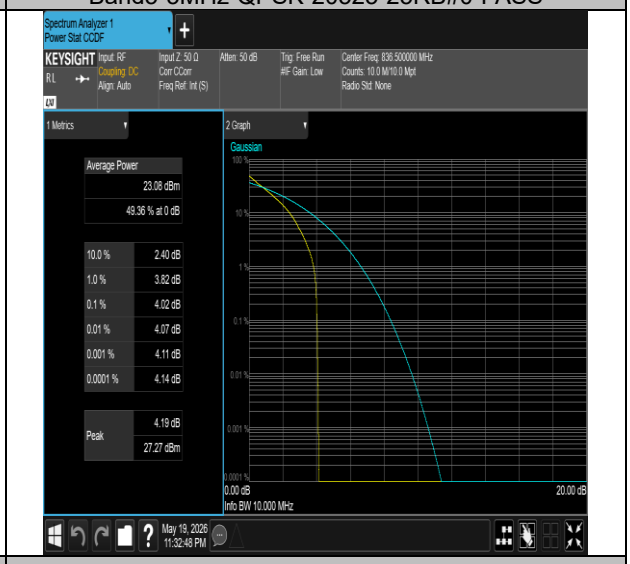


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