

# **TEST REPORT**

**Applicant:** Quectel Wireless Solutions Co., Ltd.  
**EUT Description:** 5G RedCap Sub-6 GHz M.2 Module  
**Model:** RM255C-GL  
**Brand:** QUECTEL  
**FCC ID:** XMR2025RM255CGL  
**Standards:** FCC CFR Title 47 Part 2  
FCC CFR Title 47 Part 96.47  
**Date of Receipt:** 2025/02/26  
**Date of Test:** 2025/02/26 to 2025/05/28  
**Date of Issue:** 2025/05/28

TOWE. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

the results documented in this report apply only the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility assure that additional production units of the model are manufactured with identical electrical and mechanical components. All sample tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not taken into account unless noted otherwise. without written approval of TOWE, the test report shall not be reproduced except in full.



A handwritten signature in black ink, appearing to be 'Huang Kun'.

**Huang Kun**  
**Approved By:**

A handwritten signature in black ink, appearing to be 'Chen Chengfu'.

**Chen Chengfu**  
**Reviewed By:**

## Revision History

| Rev. | Issue Date | Description | Revised by   |
|------|------------|-------------|--------------|
| 01   | 2025/05/28 | Original    | Chen Chengfu |

## Summary of Test Results

| FCC Part | Test Item                               | Verdict |
|----------|-----------------------------------------|---------|
| §96.47   | End user device additional requirements | Pass    |

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# 1 General Description

## 1.1 Lab Information

### 1.1.1 Testing Location

These measurements tests were conducted at the Sushi TOWE Wireless Testing(Shenzhen) Co., Ltd. facility located at F401 and F101, Building E, Hongwei Industrial Zone, Liuxian 3rd Road, Bao'an District, Shenzhen, China. The measurement facility is compliant with the test site requirements specified in ANSI C63.4-2014  
Tel.: +86-755-27212361  
Contact Email: info@towewireless.com

### 1.1.2 Test Facility / Accreditations

#### A2LA (Certificate Number: 7088.01)

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).

#### FCC Designation No.: CN1353

Sushi TOWE Wireless Testing(Shenzhen) Co., Ltd. has been recognized as an accredited testing laboratory. Designation Number: CN1353.

#### ISED CAB identifier: CN0152

Sushi TOWE Wireless Testing(Shenzhen) Co., Ltd. has been recognized by ISED as an accredited testing laboratory.  
CAB identifier: CN0152  
Company Number: 31000

## 1.2 Client Information

### 1.2.1 Applicant

|            |                                                                                                                         |
|------------|-------------------------------------------------------------------------------------------------------------------------|
| Applicant: | Quectel Wireless Solutions Co., Ltd.                                                                                    |
| Address:   | Building 5, Shanghai Business Park Phase III (Area B), No.1016 Tianlin Road, Minhang District, Shanghai, 200233, China. |

### 1.2.2 Manufacturer

|               |                                                                                                                         |
|---------------|-------------------------------------------------------------------------------------------------------------------------|
| Manufacturer: | Quectel Wireless Solutions Co., Ltd.                                                                                    |
| Address:      | Building 5, Shanghai Business Park Phase III (Area B), No.1016 Tianlin Road, Minhang District, Shanghai, 200233, China. |

### 1.3 Product Information

|                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                 |                  |                  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|------------------|
| EUT Description:                                                                                                                                                                                                                                                                                    | 5G RedCap Sub-6 GHz M.2 Module                                                                                                                                                  |                  |                  |
| Model:                                                                                                                                                                                                                                                                                              | RM255C-GL                                                                                                                                                                       |                  |                  |
| Brand:                                                                                                                                                                                                                                                                                              | QUECTEL                                                                                                                                                                         |                  |                  |
| Hardware Version:                                                                                                                                                                                                                                                                                   | R1.0                                                                                                                                                                            |                  |                  |
| Software Version:                                                                                                                                                                                                                                                                                   | RM255CGLAAR01A01M2G                                                                                                                                                             |                  |                  |
| IMEI:                                                                                                                                                                                                                                                                                               | 866243060020764                                                                                                                                                                 |                  |                  |
| Technical specification:                                                                                                                                                                                                                                                                            |                                                                                                                                                                                 |                  |                  |
| Modulation Type:                                                                                                                                                                                                                                                                                    | LTE: <input checked="" type="checkbox"/> QPSK, <input checked="" type="checkbox"/> 16QAM, <input checked="" type="checkbox"/> 64QAM, <input checked="" type="checkbox"/> 256QAM |                  |                  |
| Operation Frequency Range:                                                                                                                                                                                                                                                                          | Band                                                                                                                                                                            | TX Frequency     | RX Frequency     |
|                                                                                                                                                                                                                                                                                                     | LTE Band 48                                                                                                                                                                     | 3550 to 3700 MHz | 3550 to 3700 MHz |
| Antenna Type:                                                                                                                                                                                                                                                                                       | <input checked="" type="checkbox"/> External, <input type="checkbox"/> Integrated                                                                                               |                  |                  |
| Antenna Gain:                                                                                                                                                                                                                                                                                       | Band                                                                                                                                                                            | Ant1 (dBi)       |                  |
|                                                                                                                                                                                                                                                                                                     | LTE Band 48                                                                                                                                                                     | -6.12            |                  |
| Remark:<br>1.The above EUT's information was declared by applicant, please refer to the specifications or user's manual for more detailed description.<br>2.RM255C-GL has two versions, one is the standard version, the other is customized version, refer to the statement provided by applicant. |                                                                                                                                                                                 |                  |                  |

## 2 Test Configuration

### 2.1 Description of test setup

| Description                                        | Manufacturer | Model         | ID               |
|----------------------------------------------------|--------------|---------------|------------------|
| LTE Base Station                                   | Baicells     | mBS31001      | 2AG32MBS3100196N |
| Router                                             | TP Link      | TL-WDR6300    | /                |
| Laptop                                             | DELL         | Latitude 3510 | /                |
| Development Board*                                 | QUECTEL      | 5G-M2-EVB     | /                |
| Remark: *the information is provided by applicant. |              |               |                  |

### 2.2 Test Environment

|                   |                    |
|-------------------|--------------------|
| Temperature:      | 24°C ~ 26°C        |
| Relative Humidity | 45-56 % RH Ambient |
| Voltage:          | Nominal: 3.7 Vdc   |

### 2.3 Test RF Cable

**For all conducted test items:** The offset level is set spectrum analyzer to compensate the RF cable loss and attenuator factor between RF conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level will be exactly the RF output level.

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor.

### 2.4 Modifications

No modifications were made during testing.

### 3 Equipment and Measurement Uncertainty

All test and measuring equipment utilized to perform the tests documented in this report are calibrated on a regular basis, whichever is less, and where applicable is traceable recognized national standards.

#### 3.1 Test Equipment List

| Radiated Emission |              |                 |             |            |            |
|-------------------|--------------|-----------------|-------------|------------|------------|
| Description       | Manufacturer | Model           | SN          | Last Due   | Cal Due    |
| Signal Analyzer   | Keysight     | N9020A          | US46470468  | 2024/03/25 | 2025/03/24 |
|                   |              |                 |             | 2025/03/14 | 2026/03/13 |
| Power Divider     | Qotana       | DBPD0200001800C | 22122900036 | 2023/04/08 | 2025/04/07 |
|                   |              |                 |             | 2025/03/11 | 2026/03/10 |

#### 3.2 Measurement Uncertainty

| Parameter       | U <sub>lab</sub> |
|-----------------|------------------|
| Frequency error | 371.88Hz         |

Uncertainty figures are valid to a confidence level of 95%

## 4 Test Results

### 4.1 End user Device Additional Requirements.

#### Limits

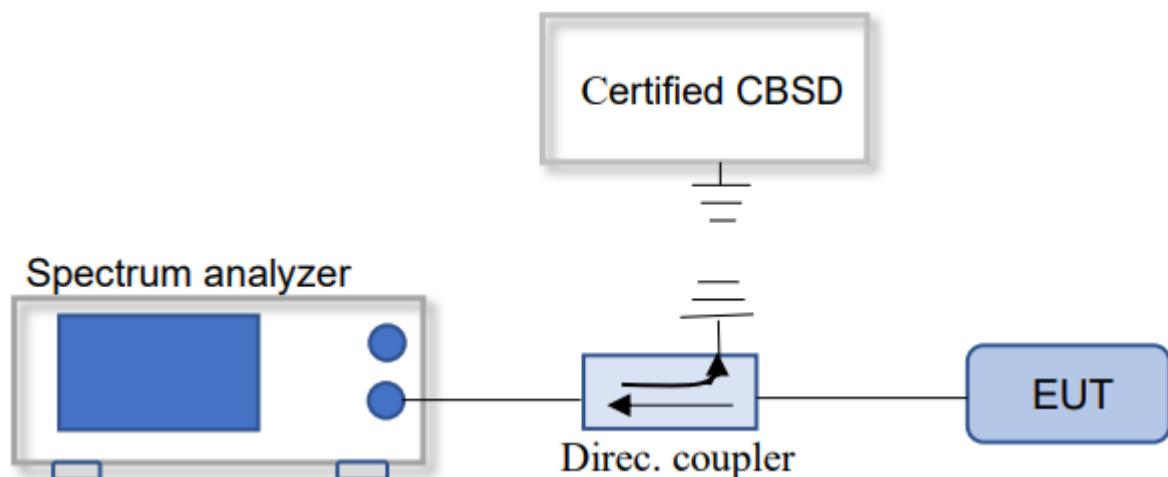
End User Devices will operate only after it receives authorization from an associated CBSD, including the frequencies and power limits for their operation.

End User Devices discontinues operation, changes Frequency, and changes its operational power level within 10 s of receiving instructions from its associated CBSD.

#### Test Procedure

KDB 940660 D01 Part 96 CBRS Eqpt v02, WINNF-TS-0122 V1.0.2

#### Test Setup



#### Test Settings

Based on the End user device additional requirements. During the test, use a certified Ruckus CBSD device (LTE Base Station FCC ID: 2AG32MBS3100196N) as a companion device.

1. Configure CBSD to operate at 3600MHz~3630MHz, and Power level 10dBm/MHz
2. Enable AP service from Ruckus Cloud management
3. Check End User Devices Frequency and Power
4. Disable AP service from Ruckus Cloud management, check whether the EUT stops transmitting within 10s
5. Repeat step 2 to step 4 with the CBSD operating at 3670MHz~3690MHz, and Power level 20dBm/MHz.

#### Measuring Instruments

The measuring equipment is listed in the section 3.1 of this test report.

#### Test Result

The detailed test data see: **Appendix**.

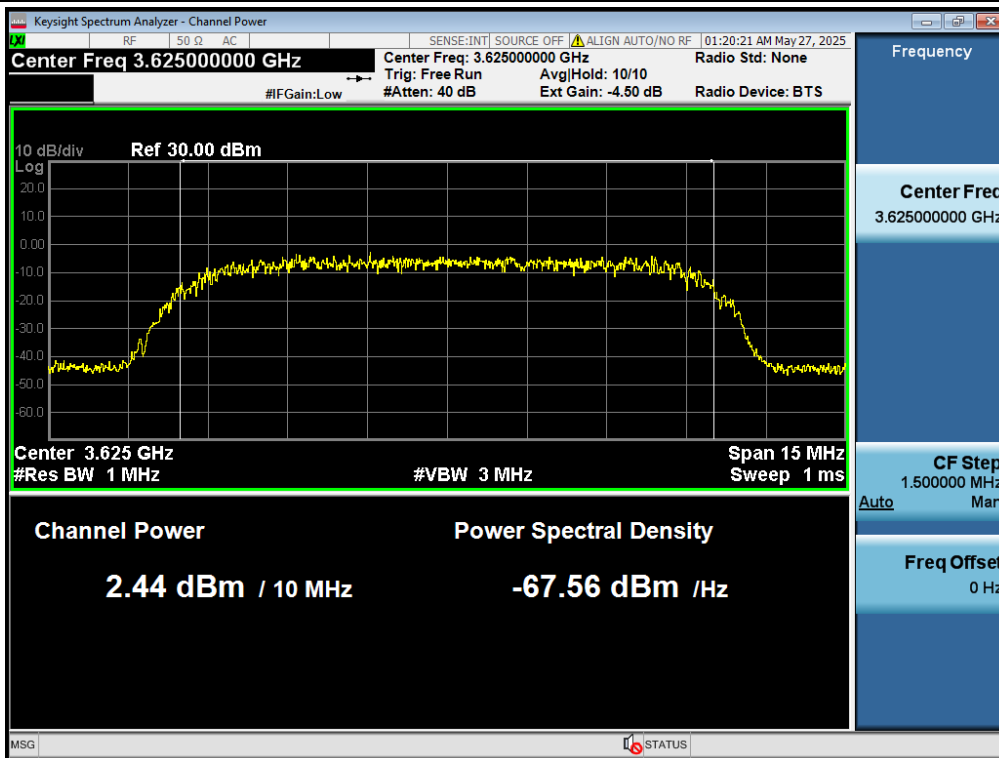
## 5 Test Setup Photos

The detailed test data see: **Appendix-D PART96.47 Setup Photos**

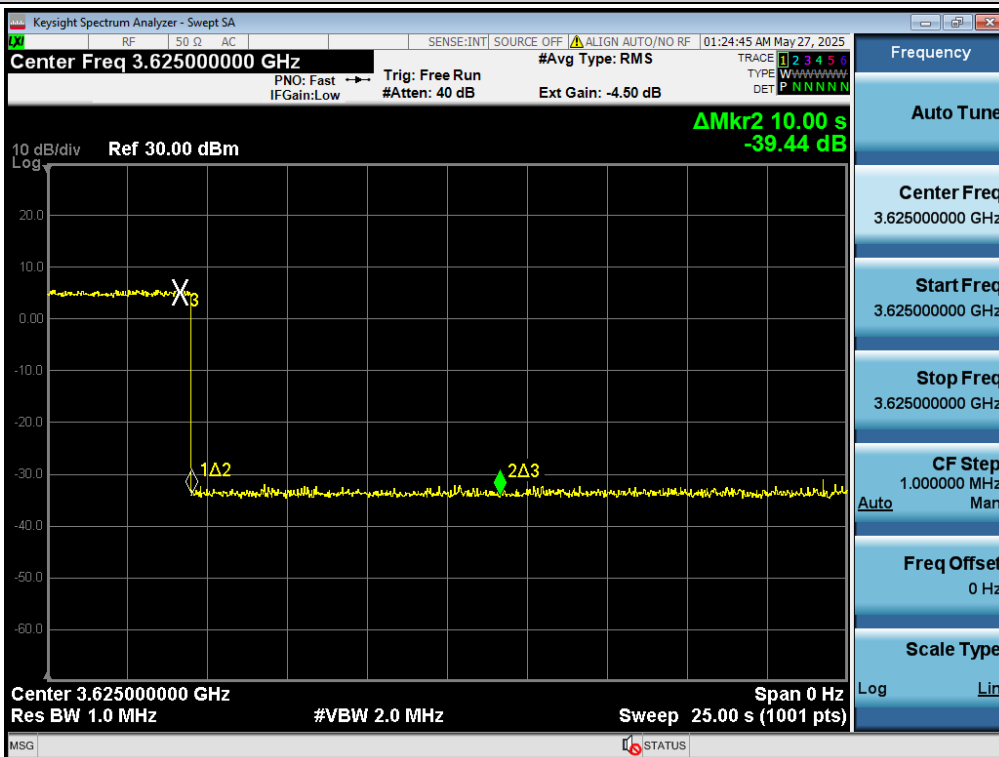
# Appendix

## LTE

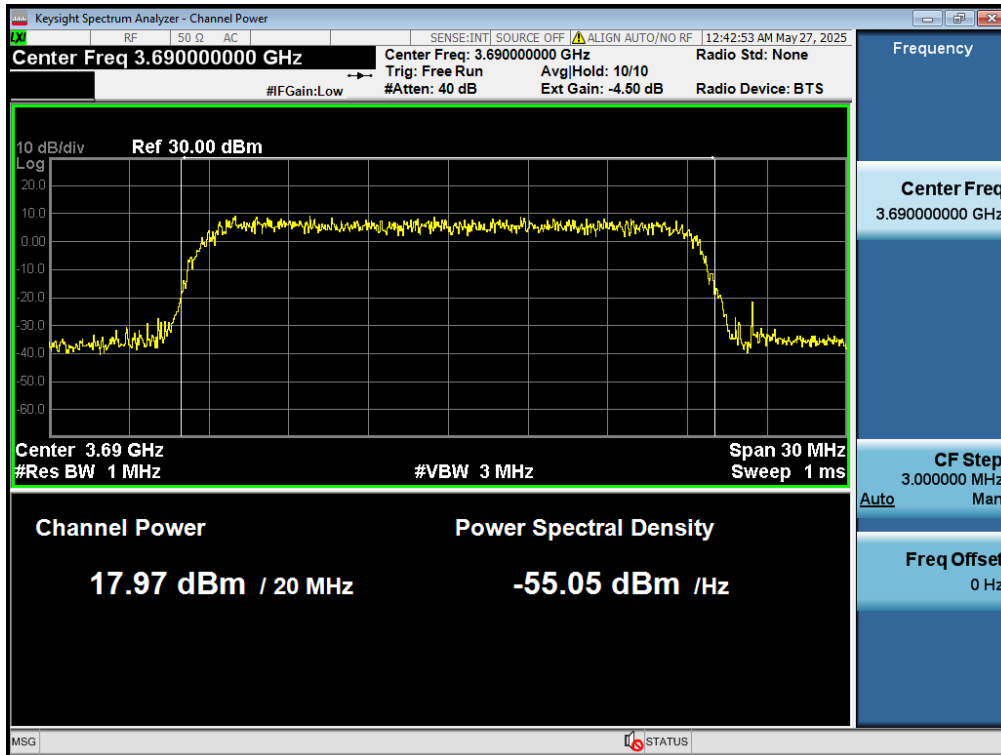
Bandwidth: 10MHz Setup with frequency 3625MHz and power level 10dBm/MHz



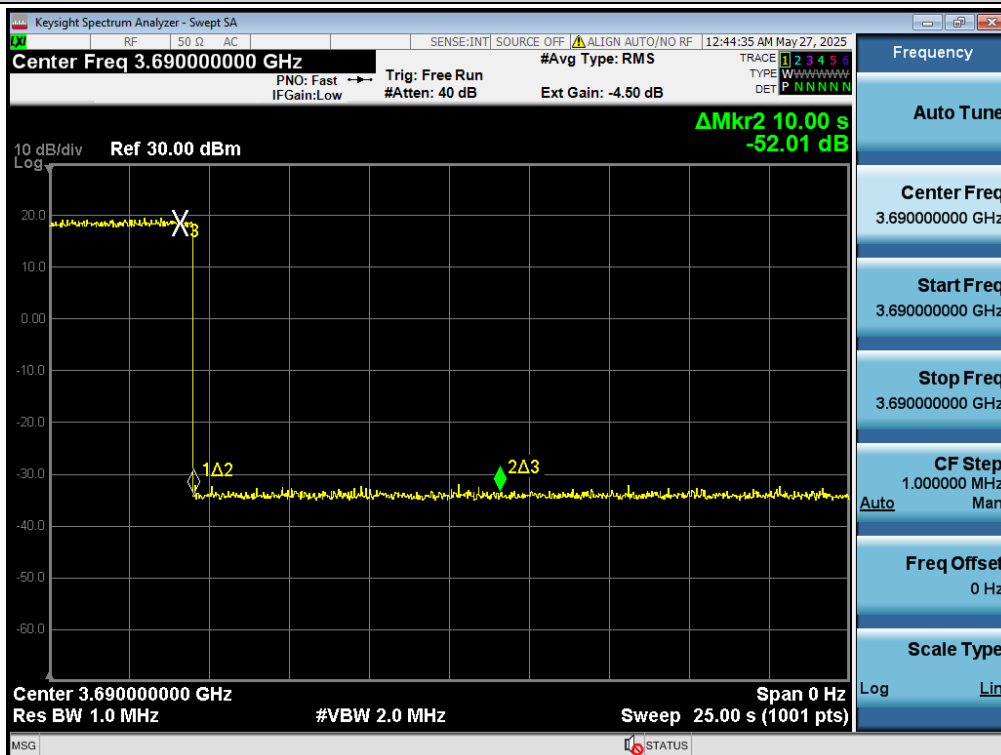
EUT stops transmission within 10 seconds of receiving instructions from its associated CBSD.



## Bandwidth: 20MHz Setup with frequency 3690MHz and power level 20dBm/MHz



EUT stops transmission within 10 seconds of receiving instructions from its associated CBSD.



~The End~