



# PART 0 SAR CHAR REPORT

No. 25T04Z100361-019

**Luxshare Precision Limited**

**5G Mobile Phone**

**Model Name: TMRV085G**

**with**

**Hardware Version: V1.0**

**Software Version: TMRV085G\_0.02.01**

**FCC ID: 2BNRMTMRV085G**

**Issued Date: 2025-6-9**

**Note:**

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of CTTL.

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No. 25T04Z100361-019

## **REPORT HISTORY**

| <b>Report Number</b> | <b>Revision</b> | <b>Issue Date</b> | <b>Description</b>                      |
|----------------------|-----------------|-------------------|-----------------------------------------|
| 25T04Z100361-019     | Rev.0           | 2025-05-26        | Initial creation of test report         |
| 25T04Z100361-019     | Rev.1           | 2025-06-09        | Update information for the Company Name |

## TABLE OF CONTENT

|                                                   |          |
|---------------------------------------------------|----------|
| <b>1 TEST LABORATORY .....</b>                    | <b>4</b> |
| <b>1.1. INTRODUCTION &amp; ACCREDITATION.....</b> | <b>4</b> |
| <b>1.2. TESTING LOCATION .....</b>                | <b>4</b> |
| <b>1.3. TESTING ENVIRONMENT .....</b>             | <b>4</b> |
| <b>1.4. PROJECT DATA.....</b>                     | <b>4</b> |
| <b>1.5. SIGNATURE.....</b>                        | <b>4</b> |
| <b>2 INTRODUCTION .....</b>                       | <b>5</b> |
| <b>3 EQUIPMENT UNDER TEST (EUT) OVERVIEW.....</b> | <b>6</b> |
| <b>4 SAR CHARACTERIZATION.....</b>                | <b>7</b> |
| 4.1 DSI AND SAR DETERMINATION .....               | 7        |
| 4.2 SAR DESIGN TARGET AND UNCERTAINTY .....       | 8        |
| 4.2 SAR CHAR.....                                 | 9        |
| <b>5 MEASUREMENT UNCERTAINTY .....</b>            | <b>9</b> |

## 1 Test Laboratory

### 1.1. Introduction & Accreditation

Telecommunication Technology Labs, CAICT is an ISO/IEC 17025:2017 accredited test laboratory under American Association for Laboratory Accreditation (A2LA) with lab code 7049.01, and is also an FCC accredited test laboratory (CN1349), and ISED accredited test laboratory (CAB identifier:CN0066). The detail accreditation scope can be found on A2LA website.

### 1.2. Testing Location

Location 1: CTTL(huayuan North Road)

Address: No. 52, Huayuan North Road, Haidian District, Beijing,  
P. R. China 100191

### 1.3. Testing Environment

Normal Temperature: 18-25°C

Relative Humidity: 30-70%

### 1.4. Project data

Testing Start Date: 2025-04-02

Testing End Date: 2025-05-23

### 1.5. Signature



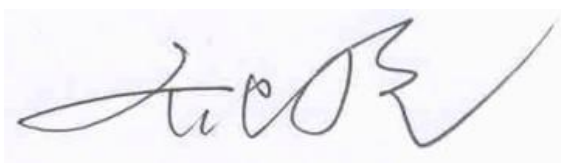
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Zhang Xin  
(Prepared this test report)



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Lin Jun  
(Reviewed this test report)



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Qi Dianyu  
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## 2 Introduction

The equipment under test (EUT) is a smart phone. It contains the Qualcomm modem supporting 2G/3G/4G technologies and 5G NR Sub-6 GHz technologies. These modems enable Qualcomm Smart Transmit feature to control and manage transmitting power in real time and to ensure at all times the time-averaged RF exposure is in compliance with the ISED requirement.

In the Part 0 report, the EUT SAR are characterized for WWAN radios (2G/3G/4G/Sub6 NR) to determine the power limit that corresponds to the exposure design target after accounting for all device design related uncertainties, i.e., SAR\_design\_target (< ISED SAR limit) for sub-6. The SAR characterization are denoted as SAR Char. SAR Char will be used as input for Qualcomm Smart Transmit to operate. SAR Char will be loaded and store in the EUT via the Embedded File System (EFS).

The compliance test under the static transmission scenario and simultaneous transmission analysis are reported in Part 1 report. The validation of the time-averaging algorithm and compliance under the dynamic (time- varying) transmission scenario for WWAN technologies are reported in Part 2 report.

The EUT supports WLAN/BT radio as well but WLAN/BT modem is not enabled with Smart Transmit.

### Nomenclature for Part 0 Report

| Term               | Description                                                                                                                                         |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| $P_{\text{limit}}$ | The time-averaged RF power which corresponds to SAR_design_target.                                                                                  |
| $P_{\text{max}}$   | Maximum target power level                                                                                                                          |
| SAR_design_target: | The design target for SAR compliance. It should be less than regulatory power density limit to account for all device design related uncertainties. |
| SAR Char           | $P_{\text{limit}}$ for all the technologies/bands for all applicable DSI                                                                            |

### 3 Equipment Under Test (EUT) Overview

|                                     |                                                                                                                                     |            |  |
|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|------------|--|
| Description:                        | 5G Mobile Phone                                                                                                                     |            |  |
| Model name:                         | TMRV085G                                                                                                                            |            |  |
| Tested Band:                        | GSM850/1900,<br>WCDMA B2/4/B5<br>LTE Band2/4/5/7/12/25/26/41/48/66/71<br>5G NR N25/41/48/66/71/78<br>BT, Wi-Fi(2.4G), Wi-Fi(5G),NFC |            |  |
| Tx Frequency:                       | 824 – 849 MHz (GSM 850)                                                                                                             |            |  |
|                                     | 1850 – 1910 MHz (GSM 1900)                                                                                                          |            |  |
|                                     | 824–849 MHz (WCDMA 850 Band V)                                                                                                      |            |  |
|                                     | 1710 – 1755 MHz (WCDMA 1700 Band IV)                                                                                                |            |  |
|                                     | 1850–1910 MHz (WCDMA1900 Band II)                                                                                                   |            |  |
|                                     | 1850 – 1910 MHz(LTE Band 2)                                                                                                         |            |  |
|                                     | 1710 – 1755 MHz (LTE Band 4)                                                                                                        |            |  |
|                                     | 824 – 849 MHz (LTE Band 5)                                                                                                          |            |  |
|                                     | 2500 – 2570 MHz(LTE Band 7)                                                                                                         |            |  |
|                                     | 699 – 716 MHz (LTE Band 12)                                                                                                         |            |  |
|                                     | 1850 – 1915 MHz(LTE Band 25)                                                                                                        |            |  |
|                                     | 814 – 849 MHz (LTE Band 26)                                                                                                         |            |  |
|                                     | 2496 – 2690 MHz (LTE Band 41)                                                                                                       |            |  |
|                                     | 3550-3700 MHz (LTE Band 48)                                                                                                         |            |  |
|                                     | 1710 – 1780 MHz (LTE Band 66)                                                                                                       |            |  |
|                                     | 665.5 – 695.5 MHz (LTE Band 71)                                                                                                     |            |  |
|                                     | 2412 – 2462 MHz (Wi-Fi 2.4G)                                                                                                        |            |  |
|                                     | 5180 – 5240 MHz                                                                                                                     | (Wi-Fi 5G) |  |
|                                     | 5260 – 5320 MHz                                                                                                                     |            |  |
|                                     | 5500 – 5700 MHz                                                                                                                     |            |  |
|                                     | 5745 – 5825 MHz                                                                                                                     |            |  |
|                                     | 2400 – 2483.5 MHz (Bluetooth)                                                                                                       |            |  |
|                                     | 1850 – 1915 MHz(n25)                                                                                                                |            |  |
|                                     | 2496 – 2690 MHz (n41)                                                                                                               |            |  |
|                                     | 3550-3700 MHz (n48)                                                                                                                 |            |  |
|                                     | 1710– 1780 MHz (n66)                                                                                                                |            |  |
|                                     | 663–698 MHz (n71)                                                                                                                   |            |  |
| 3450 – 3550 MHz (n78)               |                                                                                                                                     |            |  |
| 13.56 MHz (NFC)                     |                                                                                                                                     |            |  |
| GPRS/EGPRS Multislot Class:         | 33                                                                                                                                  |            |  |
| Test device production information: | Production unit                                                                                                                     |            |  |
| Device type:                        | Portable device                                                                                                                     |            |  |
| Antenna type:                       | Integrated antenna                                                                                                                  |            |  |
| Hotspot mode:                       | Support                                                                                                                             |            |  |

## 4 SAR Characterization

### 4.1 DSI and SAR Determination

This device uses different Device State Index (DSI) to configure different time averaged power levels based on certain exposure scenarios. Depending on the detection scheme implemented in the smartphone, the worst-case SAR is further grouped and determined for each or combined exposure scenario

**DSI and Corresponding Exposure Scenarios**

| Scenario | Description                 |
|----------|-----------------------------|
| DSI1     | Hotspot                     |
| DSI2     | Receiver on Standalone      |
| DSI3     | receiver off+WLAN           |
| DSI4     | sensor on Standalone ANT0/1 |
| DSI5     | sensor on Standalone ANT3   |
| DSI6     | sensor on Standalone ANT4   |
| DSI9     | sensor on +WLAN ANT0/1      |
| DSI10    | sensor on +WLAN ANT3        |
| DSI11    | sensor on +WLAN ANT4        |
| DSI14    | sensor off                  |

## 4.2 SAR Design Target and Uncertainty

SAR\_design\_target is determined by ensuring that it is less than FCC SAR limit after accounting for total device designed related uncertainties specified by the manufacturer.

To account for total uncertainty, SAR\_design\_target should be determined as:

$$SAR\_design\_target < SAR_{regulatory\_limit} \times 10^{\frac{-total\ uncertainty}{10}}$$

| Exposure conditions | Trigger Conditions | SAR design target     | target-W/kg |
|---------------------|--------------------|-----------------------|-------------|
| Head                | Rcv On             | 1 g SAR design target | 1.10        |
| Body Worn           | Rcv Off+Hotspot    | 1 g SAR design target | 1.10        |
| Extremity           | Rcv Off            | 10g SAR design target | 3.00        |
| Body Worn           | Rcv Off            | 1 g SAR design target | 1.10        |

|                   | Uncertainty dB<br>(k=2)2/3G | Uncertainty dB<br>(k=2)4G | Uncertainty<br>dB (k=2)NR |
|-------------------|-----------------------------|---------------------------|---------------------------|
| Total uncertainty | 1.2                         | 1                         | 1.2                       |

## 4.2 SAR Char

SAR char must be generated to cover all radio configurations and usage scenarios that the wireless device supports for operating. Plimit is calculated by linearly scaling with the measured SAR at the Ppart0 to correspond to the SAR\_design\_target. When Plimit < Pmax, Ppart0 was used as Plimit in the Smart Transmit EFS. When Plimit > Pmax and Ppart0=Pmax, calculated Pmax was used in the Smart Transmit EFS. All reported SAR obtained from the Ppart0 SAR tests was less than SAR\_Design\_target+ device uncertainty.

| Band         | ANT | Plimit           |                                    |                            |                                         |                                       |                                       |                                    |                                   |                                   |                      | Pmax |
|--------------|-----|------------------|------------------------------------|----------------------------|-----------------------------------------|---------------------------------------|---------------------------------------|------------------------------------|-----------------------------------|-----------------------------------|----------------------|------|
|              |     | DSI 1<br>Hotspot | DSI 2<br>receiver on<br>Standalone | DSI 3<br>receiver off+WLAN | DSI 4<br>sensor on<br>Standalone ANT0/1 | DSI 5<br>sensor on<br>Standalone ANT3 | DSI 6<br>sensor on<br>Standalone ANT4 | DSI 9<br>sensor on<br>+WLAN ANT0/1 | DSI 10<br>sensor on<br>+WLAN ANT3 | DSI 11<br>sensor on<br>+WLAN ANT4 | DSI 14<br>sensor off |      |
| GSM_B850     | 0   | 33.0             | 33.0                               | 33.0                       | 33.0                                    | 33.0                                  | 33.0                                  | 33.0                               | 33.0                              | 33.0                              | 33.0                 | 33   |
| GSM_B850     | 3   | 33.0             | 32.0                               | 31.0                       | 33.0                                    | 33.0                                  | 33.0                                  | 33.0                               | 33.0                              | 33.0                              | 33.0                 | 33   |
| GSM_B1900    | 1   | 28.0             | 30.0                               | 30.0                       | 30.0                                    | 30.0                                  | 30.0                                  | 28.0                               | 30.0                              | 30.0                              | 30.0                 | 30   |
| GSM_B1900    | 3   | 28.0             | 25.0                               | 25.0                       | 30.0                                    | 30.0                                  | 30.0                                  | 30.0                               | 28.0                              | 30.0                              | 30.0                 | 30   |
| WCDMA_B2     | 1   | 22.5             | 24.5                               | 24.5                       | 22.5                                    | 24.5                                  | 24.5                                  | 22.5                               | 24.5                              | 24.5                              | 24.5                 | 24.5 |
| WCDMA_B2     | 3   | 21.5             | 16.5                               | 16.5                       | 24.5                                    | 22.5                                  | 24.5                                  | 24.5                               | 21.5                              | 24.5                              | 24.5                 | 24.5 |
| WCDMA_B4     | 1   | 22.5             | 24.5                               | 24.5                       | 22.5                                    | 24.5                                  | 24.5                                  | 22.5                               | 24.5                              | 24.5                              | 24.5                 | 24.5 |
| WCDMA_B4     | 3   | 21.5             | 18.5                               | 17.5                       | 24.5                                    | 22.5                                  | 24.5                                  | 24.5                               | 21.5                              | 24.5                              | 24.5                 | 24.5 |
| WCDMA_B5     | 0   | 24.5             | 24.5                               | 24.5                       | 24.5                                    | 24.5                                  | 24.5                                  | 24.5                               | 24.5                              | 24.5                              | 24.5                 | 24.5 |
| WCDMA_B5     | 3   | 24.5             | 23.5                               | 21.5                       | 24.5                                    | 24.5                                  | 24.5                                  | 24.5                               | 24.5                              | 24.5                              | 24.5                 | 24.5 |
| LTE_B2       | 1   | 21.0             | 24.0                               | 24.0                       | 22.0                                    | 24.0                                  | 24.0                                  | 21.0                               | 24.0                              | 24.0                              | 24.0                 | 24   |
| LTE_B2       | 3   | 21.0             | 16.0                               | 16.0                       | 24.0                                    | 22.0                                  | 24.0                                  | 24.0                               | 21.0                              | 24.0                              | 24.0                 | 24   |
| LTE_B4       | 1   | 21.0             | 24.0                               | 24.0                       | 22.0                                    | 24.0                                  | 24.0                                  | 21.0                               | 24.0                              | 24.0                              | 24.0                 | 24   |
| LTE_B4       | 3   | 21.0             | 18.0                               | 16.0                       | 24.0                                    | 22.0                                  | 24.0                                  | 24.0                               | 21.0                              | 24.0                              | 24.0                 | 24   |
| LTE_B5       | 0   | 24.0             | 24.0                               | 24.0                       | 24.0                                    | 24.0                                  | 24.0                                  | 24.0                               | 24.0                              | 24.0                              | 24.0                 | 24   |
| LTE_B5       | 3   | 24.0             | 23.0                               | 22.0                       | 24.0                                    | 24.0                                  | 24.0                                  | 24.0                               | 24.0                              | 24.0                              | 24.0                 | 24   |
| LTE_B7       | 3   | 20.0             | 18.0                               | 18.0                       | 23.0                                    | 20.0                                  | 23.0                                  | 23.0                               | 20.0                              | 23.0                              | 23.0                 | 23   |
| LTE_B12      | 0   | 24.0             | 24.0                               | 24.0                       | 24.0                                    | 24.0                                  | 24.0                                  | 24.0                               | 24.0                              | 24.0                              | 24.0                 | 24   |
| LTE_B12      | 3   | 24.0             | 23.0                               | 22.0                       | 24.0                                    | 24.0                                  | 24.0                                  | 24.0                               | 24.0                              | 24.0                              | 24.0                 | 24   |
| LTE_B25      | 1   | 21.0             | 24.0                               | 24.0                       | 22.0                                    | 24.0                                  | 24.0                                  | 21.0                               | 24.0                              | 24.0                              | 24.0                 | 24   |
| LTE_B25      | 3   | 21.0             | 16.0                               | 16.0                       | 24.0                                    | 22.0                                  | 24.0                                  | 24.0                               | 21.0                              | 24.0                              | 24.0                 | 24   |
| LTE_B26      | 0   | 24.0             | 24.0                               | 24.0                       | 24.0                                    | 24.0                                  | 24.0                                  | 24.0                               | 24.0                              | 24.0                              | 24.0                 | 24   |
| LTE_B26      | 3   | 24.0             | 23.0                               | 22.0                       | 24.0                                    | 24.0                                  | 24.0                                  | 24.0                               | 24.0                              | 24.0                              | 24.0                 | 24   |
| LTE_B66      | 1   | 21.0             | 24.0                               | 24.0                       | 22.0                                    | 24.0                                  | 24.0                                  | 21.0                               | 24.0                              | 24.0                              | 24.0                 | 24   |
| LTE_B66      | 3   | 21.0             | 18.0                               | 16.0                       | 24.0                                    | 22.0                                  | 24.0                                  | 24.0                               | 21.0                              | 24.0                              | 24.0                 | 24   |
| LTE_B71      | 0   | 24.0             | 24.0                               | 24.0                       | 24.0                                    | 24.0                                  | 24.0                                  | 24.0                               | 24.0                              | 24.0                              | 24.0                 | 24   |
| LTE_B71      | 3   | 24.0             | 23.0                               | 22.0                       | 24.0                                    | 24.0                                  | 24.0                                  | 24.0                               | 24.0                              | 24.0                              | 24.0                 | 24   |
| LTE_B41-PC2  | 3   | 21.0             | 19.0                               | 18.0                       | 26.0                                    | 21.0                                  | 26.0                                  | 26.0                               | 21.0                              | 26.0                              | 26.0                 | 26   |
| LTE_B41-PC2  | 1   | 18.0             | 26.0                               | 26.0                       | 23.0                                    | 26.0                                  | 26.0                                  | 22.0                               | 26.0                              | 26.0                              | 26.0                 | 26   |
| LTE_B41-PC3  | 3   | 20.5             | 18.5                               | 17.5                       | 24.0                                    | 20.5                                  | 24.0                                  | 24.0                               | 20.5                              | 24.0                              | 24.0                 | 24   |
| LTE_B41-PC3  | 1   | 17.5             | 24.0                               | 24.0                       | 22.5                                    | 24.0                                  | 24.0                                  | 21.5                               | 24.0                              | 24.0                              | 24.0                 | 24   |
| LTE_B48      | 4   | 21.0             | 16.0                               | 15.0                       | 24.0                                    | 24.0                                  | 21.0                                  | 24.0                               | 24.0                              | 21.0                              | 24.0                 | 24   |
| LTE_B48      | 2   | 17.0             | 23.0                               | 23.0                       | 23.0                                    | 23.0                                  | 23.0                                  | 23.0                               | 23.0                              | 23.0                              | 23.0                 | 23   |
| NR5G_N25     | 1   | 21.0             | 24.0                               | 24.0                       | 22.0                                    | 24.0                                  | 24.0                                  | 21.0                               | 24.0                              | 24.0                              | 24.0                 | 24   |
| NR5G_N25     | 3   | 20.0             | 16.0                               | 16.0                       | 24.0                                    | 22.0                                  | 24.0                                  | 24.0                               | 21.0                              | 24.0                              | 24.0                 | 24   |
| NR5G_N66     | 1   | 21.0             | 24.0                               | 24.0                       | 22.0                                    | 24.0                                  | 24.0                                  | 21.0                               | 24.0                              | 24.0                              | 24.0                 | 24   |
| NR5G_N66     | 3   | 21.0             | 18.0                               | 16.0                       | 24.0                                    | 22.0                                  | 24.0                                  | 24.0                               | 21.0                              | 24.0                              | 24.0                 | 24   |
| NR5G_N71     | 0   | 24.0             | 24.0                               | 24.0                       | 24.0                                    | 24.0                                  | 24.0                                  | 24.0                               | 24.0                              | 24.0                              | 24.0                 | 24   |
| NR5G_N71     | 3   | 24.0             | 23.0                               | 22.0                       | 24.0                                    | 24.0                                  | 24.0                                  | 24.0                               | 24.0                              | 24.0                              | 24.0                 | 24   |
| NR5G_N41-PC2 | 3   | 20.0             | 17.0                               | 16.0                       | 26.0                                    | 21.0                                  | 26.0                                  | 26.0                               | 21.0                              | 26.0                              | 26.0                 | 26   |
| NR5G_N41-PC2 | 1   | 20.0             | 26.0                               | 26.0                       | 23.0                                    | 26.0                                  | 26.0                                  | 23.0                               | 26.0                              | 26.0                              | 26.0                 | 26   |
| NR5G_N41-PC3 | 3   | 18.0             | 16.0                               | 16.0                       | 22.0                                    | 21.0                                  | 22.0                                  | 22.0                               | 18.0                              | 22.0                              | 22.0                 | 22   |
| NR5G_N41-PC3 | 2   | 20.0             | 22.0                               | 16.0                       | 22.0                                    | 22.0                                  | 22.0                                  | 22.0                               | 22.0                              | 22.0                              | 22.0                 | 22   |
| NR5G_N48     | 4   | 21.0             | 17.0                               | 15.0                       | 24.0                                    | 24.0                                  | 21.0                                  | 24.0                               | 24.0                              | 21.0                              | 24.0                 | 24   |
| NR5G_N48     | 2   | 18.0             | 23.0                               | 23.0                       | 23.0                                    | 23.0                                  | 23.0                                  | 23.0                               | 23.0                              | 23.0                              | 23.0                 | 23   |
| NR5G_N78-PC3 | 4   | 20.0             | 14.0                               | 12.0                       | 24.0                                    | 24.0                                  | 20.0                                  | 24.0                               | 24.0                              | 20.0                              | 24.0                 | 24   |
| NR5G_N78-PC3 | 2   | 18.0             | 23.0                               | 23.0                       | 23.0                                    | 23.0                                  | 23.0                                  | 23.0                               | 23.0                              | 23.0                              | 23.0                 | 23   |

### Note:

- 1 When Pmax < Plimit, the DUT will operate at a power level up to Pmax.
- 2 Pmax is used for RF tune up procedure. The maximum allowed output power is equal to Pmax + device uncertainty.

## 5 Measurement Uncertainty

Per KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz, when the highest measured 1-g SAR within a frequency band is < 1.5 W/kg and the measured 10-g SAR within a frequency band is < 3.75 W/kg. The expanded SAR measurement uncertainty must be  $\leq 30\%$ , for a confidence interval of k = 2. If these conditions are met, extensive SAR measurement uncertainty analysis described in IEEE Std 1528-2013 is not required in SAR reports submitted for equipment approval.

Therefore, the measurement uncertainty is not required.