

# TEST REPORT

**Application No.:** SZCR2504001271MO  
**Applicant:** Rolling Wireless S.à r.l.  
**Address of Applicant:** 8-10 rue Mathias Hardt 1717 Luxembourg  
**Manufacturer:** Rolling Wireless S.à r.l.  
**Address of Manufacturer:** 8-10 rue Mathias Hardt 1717 Luxembourg  
**EUT Description:** RN934V  
**Model No.:** RN934V  
**Trade Mark:** Rolling Wireless  
**FCC ID:** 2AX2URN934V  
**Standards:** FCC 47 CFR Part 2.1091  
 FCC KDB 447498 D01 v06  
**Date of Receipt:** 2025/04/02  
**Date of Issue:** 2025/05/13

|                     |              |
|---------------------|--------------|
| <b>Test Result:</b> | <b>PASS*</b> |
|---------------------|--------------|

\* In the configuration tested, the EUT complied with the standards specified above.

*Keny Xu*

Keny Xu

EMC Laboratory Manager



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## SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

SZEMC-TRF-01 Rev. A/1

Report No.: SZCR250400127104

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| Revision Record |         |            |          |          |
|-----------------|---------|------------|----------|----------|
| Version         | Chapter | Date       | Modifier | Remark   |
| 01              |         | 2025/05/13 |          | Original |
|                 |         |            |          |          |
|                 |         |            |          |          |

|                          |  |                                 |  |  |
|--------------------------|--|---------------------------------|--|--|
| Authorized for issue by: |  |                                 |  |  |
|                          |  | Donjon . Huang                  |  |  |
|                          |  | Donjon Huang / Project Engineer |  |  |
|                          |  | Eric Fu                         |  |  |
|                          |  | Eric Fu/Reviewer                |  |  |



SGS-CSTC Standards Technical Services Co., Ltd.  
Shenzhen Branch Testing Center Laboratory

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### 3 General Information

#### 3.1 General Description of EUT

|                                                                                                                                                                              |                                                                                                                       |         |              |         |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|---------|--------------|---------|
| Hardware Version:                                                                                                                                                            | 1                                                                                                                     |         |              |         |
| Software Version:                                                                                                                                                            | AFPQ52XA_01.13.03.00                                                                                                  |         |              |         |
| Power Supply:                                                                                                                                                                | DC 4V                                                                                                                 |         |              |         |
| HPUE Power Class:                                                                                                                                                            | Class 2: LTE Band 41, LTE CA_41C, NR Band n41; NR Band n77; NR Band n78                                               |         |              |         |
| Antenna Type:                                                                                                                                                                | <input checked="" type="checkbox"/> External, <input type="checkbox"/> Integrated                                     |         |              |         |
| Antenna Gain:                                                                                                                                                                | LTE Band 5:                                                                                                           | -0.5dBi | LTE Band 7:  | -2.5dBi |
|                                                                                                                                                                              | LTE Band 38:                                                                                                          | 3.0dBi  | LTE Band 41: | 2.9dBi  |
|                                                                                                                                                                              | LTE CA_5B:                                                                                                            | -0.5dBi | LTE CA_7C:   | -2.5dBi |
|                                                                                                                                                                              | LTE CA_38C:                                                                                                           | 3.0dBi  | LTE CA_41C:  | 2.9dBi  |
|                                                                                                                                                                              | NR Band n5:                                                                                                           | -0.5dBi | NR Band n7:  | -2.5dBi |
|                                                                                                                                                                              | NR Band n38:                                                                                                          | 3.0dBi  | NR Band n41: | 2.9dBi  |
|                                                                                                                                                                              | NR Band n77:                                                                                                          | 2.9dBi  | NR Band n78: | 2.9dBi  |
|                                                                                                                                                                              | NR CA:<br>CA_n5A-n77A, CA_n5A-n78A, CA_n7A-n77A, CA_n7A-n78A                                                          |         |              |         |
|                                                                                                                                                                              | ENDC:<br>DC_5A_n77A(PC2),DC_5A_n78A(PC2),DC_7A_n77A(PC2),<br>DC_7A_n78A(PC2),DC_38A_n78A,DC_41A_n77A(PC2),DC_41A_n78A |         |              |         |
| Note:<br>The antenna gain are derived from the gain information report provided by the manufacturer.                                                                         |                                                                                                                       |         |              |         |
| Remark:<br>As above information is provided and confirmed by the applicant. SGS is not liable to the accuracy, suitability, reliability or/and integrity of the information. |                                                                                                                       |         |              |         |



## 3.2 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen Branch

No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China. 518057.

Tel: +86 755 2601 2053 Fax: +86 755 2671 0594

No tests were sub-contracted.

## 3.3 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **A2LA (Certificate No. 3816.01)**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

- **VCCI (Member No. 1937)**

The 3m Fully-anechoic chamber for above 1GHz, 10m Semi-anechoic chamber for below 1GHz, Shielded Room for Mains Port Conducted Interference Measurement and Telecommunication Port Conducted Interference Measurement of SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen EMC laboratory have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-20026, R-14188, C-12383 and T-11153 respectively.

- **FCC –Designation Number: CN1336**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized as an accredited testing laboratory.

Designation Number: CN1336. Test Firm Registration Number: 787754.

- **Innovation, Science and Economic Development Canada**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0006.

IC#: 4620C.





## 4 RF Exposure Evaluation

### 4.1 RF Exposure Compliance Requirement

#### 4.1.1 Limits

| Frequency range<br>(MHz)                                       | Electric field strength<br>(V/m) | Magnetic field strength<br>(A/m) | Power density<br>(mW/cm <sup>2</sup> ) | Averaging time<br>(minutes) |
|----------------------------------------------------------------|----------------------------------|----------------------------------|----------------------------------------|-----------------------------|
| <b>(A) Limits for Occupational/Controlled Exposures</b>        |                                  |                                  |                                        |                             |
| 0.3-3.0                                                        | 614                              | 1.63                             | *(100)                                 | 6                           |
| 3.0-30                                                         | 1842/f                           | 4.89/f                           | *(900/f <sup>2</sup> )                 | 6                           |
| 30-300                                                         | 61.4                             | 0.163                            | 1.0                                    | 6                           |
| 300-1500                                                       | /                                | /                                | f/300                                  | 6                           |
| 1500-100,000                                                   | /                                | /                                | 5                                      | 6                           |
| <b>(B) Limits for General Population/Uncontrolled Exposure</b> |                                  |                                  |                                        |                             |
| 0.3-1.34                                                       | 614                              | 1.63                             | *(100)                                 | 30                          |
| 1.34-30                                                        | 824/f                            | 2.19/f                           | *(180/f <sup>2</sup> )                 | 30                          |
| 30-300                                                         | 27.5                             | 0.073                            | 0.2                                    | 30                          |
| 300-1500                                                       | /                                | /                                | f/1500                                 | 30                          |
| 1500-100,000                                                   | /                                | /                                | 1.0                                    | 30                          |

F=frequency in MHz  
 \*=Plane-wave equivalent power density  
 RF exposure compliance will need to be determined with respect to 1.1307(c) and (d) of the FCC rules. The emissions should be within the limits at 300kHz in Table 1 of 1.1310(use the 300kHz limits for 150kHz:614V/m,1.63A/m).

Friis Formula

Friis transmission formula:  $P_d = (P_{out} * G) / (4 * \pi * R^2)$

Where

$P_d$  = power density in mW/cm<sup>2</sup>

$P_{out}$  = output power to antenna in mW

$G$  = gain of antenna in linear scale

$\pi$  = 3.1416

$R$  = distance between observation point and center of the radiator in cm

$P_d$  is the limit of MPE, 1 mW/cm<sup>2</sup>. If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance  $r$  where the MPE limit is reached.



## 4.1.2 Test Procedure

Software provided by client enabled the EUT to transmit data at lowest, middle and highest channel individually

## 4.1.3 EUT RF Exposure Evaluation

Output Power Into Antenna & RF Exposure Evaluation Distance:

This confirmed that the device comply with MPE limit.

| Operating Band                | Frequency (MHz) | Antenna Gain (dBi) | Max Conducted Power (dBm) | EIRP(ERP) (dBm) | EIRP(ERP) Limit (dBm) | Power Density at R = 20 cm (mW/cm <sup>2</sup> ) | Limit (mW/cm <sup>2</sup> ) | Gain according to EIRP(ERP) (dBi) | Gain according to Pd (dBi) | Max Gain Allowed (dBi) | conclusion |
|-------------------------------|-----------------|--------------------|---------------------------|-----------------|-----------------------|--------------------------------------------------|-----------------------------|-----------------------------------|----------------------------|------------------------|------------|
| LTE/CA Band 5                 | 824.7           | -0.50              | 24.50                     | 21.85           | 38.45                 | 0.0500                                           | 0.5498                      | 16.10                             | 9.91                       | 9.91                   | Pass       |
| LTE/CA Band 7                 | 2502.5          | -2.50              | 24.50                     | 22.00           | 33.01                 | 0.0315                                           | 1.0000                      | 8.51                              | 12.51                      | 8.51                   | Pass       |
| LTE/CA Band 38                | 2572.5          | 3.00               | 24.50                     | 27.50           | 33.01                 | 0.1119                                           | 1.0000                      | 8.51                              | 12.51                      | 8.51                   | Pass       |
| LTE/CA Band 41 (PC2)          | 2498.5          | 2.90               | 26.50                     | 29.40           | 33.01                 | 0.1733                                           | 1.0000                      | 6.51                              | 10.51                      | 6.51                   | Pass       |
| NR Band n5                    | 826.5           | -0.50              | 24.50                     | 24.00           | 38.45                 | 0.0500                                           | 1.0000                      | 13.95                             | 12.51                      | 12.51                  | Pass       |
| NR Band n7                    | 2502.5          | -2.50              | 24.50                     | 22.00           | 33.00                 | 0.0315                                           | 1.0000                      | 8.50                              | 12.51                      | 8.50                   | Pass       |
| NR Band n38                   | 2575.0          | 3.00               | 24.50                     | 27.50           | 33.00                 | 0.1119                                           | 1.0000                      | 8.50                              | 12.51                      | 8.50                   | Pass       |
| NR Band n41 (PC2)             | 2501.0          | 2.90               | 24.50                     | 27.40           | 33.00                 | 0.1093                                           | 1.0000                      | 8.50                              | 12.51                      | 8.50                   | Pass       |
| NR Band n77 (3450-3550) (PC2) | 3455.0          | 2.90               | 27.00                     | 29.90           | 30.00                 | 0.1944                                           | 1.0000                      | 3.00                              | 10.01                      | 3.00                   | Pass       |
| NR Band n77 (3700-3980) (PC2) | 3705.0          | 2.90               | 27.00                     | 29.90           | 30.00                 | 0.1944                                           | 1.0000                      | 3.00                              | 10.01                      | 3.00                   | Pass       |
| NR Band n78 (3450-3550) (PC2) | 3455.0          | 2.90               | 27.00                     | 29.90           | 30.00                 | 0.1944                                           | 1.0000                      | 3.00                              | 10.01                      | 3.00                   | Pass       |
| NR Band n78 (3700-3800) (PC2) | 3705.0          | 2.90               | 27.00                     | 29.90           | 30.00                 | 0.1944                                           | 1.0000                      | 3.00                              | 10.01                      | 3.00                   | Pass       |



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Due to the EUT support NR ENDC and CA

$$\sum_{i=1}^n \frac{S_{E_i}(\text{duty factor})}{MPE_{E_i}} < 1$$

Both LTE and NR/LTE band can transmit simultaneously, the formula of the calculated the MPE is:

NOTE The corresponding MEs must be expressed in terms of power density in the above summation  
Therefore, the worst-case(DC\_41A\_n78A(PC2)) situation is  $0.1733+0.1944=0.3677$ ,  
which is less than "1", this confirmed that the device comply with MPE limit.

---End of Report---



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