TEST REPORT

Application No.:	SZCR2504001378MO
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:	RN932V
Model No.:	RN932V
Trade Mark:	Rolling Wireless
FCC ID:	2AX2URN932V
Standards:	FCC 47 CFR Part 2.1091 FCC KDB 447498 D01 v06
Date of Receipt:	2025/04/08
Date of Test:	2025/04/12 to 2025/07/01
Date of Issue:	2025/07/03
Test Result:	**PASS***

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

Keny Xu
EMC Laboratory Manager

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Revision Record				
Version	**Chapter**	**Date**	**Modifier**	**Remark**
01		2025/07/03		Original

Authorized for issue by:				
		Donjon Huang **Donjon Huang /Project Engineer**		
		Eric Fu **Eric Fu/Reviewer**		

2 Contents

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3 General Information

3.1 General Description of EUT

Hardware Version:	1			
Software Version:	AFPQ52XA_01.14.07.00			
Power Supply:	DC 4V			
Antenna Type:	☒ External, ☐ Integrated			
HPUE Power Class:	LTE Band 41, LTE CA_41C; NR Band n77; NR Band n78			
Antenna Gain:	LTE Band 2:	4.1dBi	LTE Band 4:	5.0dBi
	LTE Band 5:	-0.5dBi	LTE Band 7:	-2.5dBi
	LTE Band 12:	-1.5dBi	LTE Band 13:	1.6dBi
	LTE Band 14:	1.5dBi	LTE Band 17:	-2.1dBi
	LTE Band 25:	4.3dBi	LTE Band 26:	-0.5dBi
	LTE Band 41:	2.9dBi	LTE Band 48:	-3.0dBi
	LTE Band 66:	5.0dBi	LTE Band 71:	-2.0dBi
	LTE CA_2C:	4.1dBi	LTE CA_5B:	-0.5dBi
	LTE CA_7C:	-2.5dBi	LTE CA_12B:	-1.5dBi
	LTE CA_41C:	2.9dBi	LTE CA_48C:	-3.0dBi
	LTE CA_66B:	5.0dBi	LTE CA_66C:	5.0dBi
	NR Band n2:	4.1dBi	NR Band n5:	-0.5dBi
	NR Band n7:	-2.5dBi	NR Band n12:	-1.5dBi
	NR Band n13:	1.6dBi	NR Band n14:	1.5dBi
	NR Band n25:	4.3dBi	NR Band n26:	-0.5dBi
	NR Band n38:	3.0dBi	NR Band n41:	2.9dBi
	NR Band n48:	-3.0dBi	NR Band n66:	5.0dBi
	NR Band n71:	-2.0dBi	NR Band n77:	2.9dBi
	NR Band n78:	2.9dBi		
	UL CA: CA_2C, CA_5B, CA_7C, CA_12B, CA_41C, CA_48C, CA_66B, CA_66C, ENDC: DC_2A_n77A, DC_2A_n78A, DC_4A_n78A, DC_5A_n77A, DC_5A_n78A, DC_7A_n77A, DC_7A_n78A, DC_12A_n77A, DC_12A_n78A, DC_13A_n77A, DC_13A_n78A, DC_14A_n77A, DC_14A_n78A, DC_25A_n77A, DC_25A_n78A, DC_26A_n78A, DC_41A_n77A, DC_41A_n78A, DC_66A_n77A, DC_66A_n78A, DC_71A_n77A, DC_71A_n78A NR CA: CA_n2A-n48A, CA_n2A-n77A, CA_n2A-n78A, CA_n5A-n48A, CA_n5A-n77A,			

	CA_n5A-n78A, CA_n7A-n77A, CA_n7A-n78A, CA_n12A-n48A, CA_n12A-n77A, CA_n12A-n78A, CA_n13A-n77A, CA_n14A-n77A, CA_n25A-n48A, CA_n25A-n77A, CA_n25A-n78A, CA_n26A-n77A, CA_n26A-n78A, CA_n48A-n66A, CA_n66A-n77A, CA_n66A-n78A, CA_n71A-n77A, CA_n71A-n78A
	Note: The antenna gain are derived from the gain information report provided by the manufacturer.
Remark: 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.	

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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 (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm2)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f2)	6
30-300	61.4	0.163	1.0	6
300-1500	/	/	f/300	6
1500-100,000	/	/	5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f2)	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: $Pd = (Pout*G)/(4* Pi * R^2)$

Where

Pd = power density in mW/cm2

Pout = 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

Pd id the limit of MPE, 1 mW/cm2. 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/cm2)	Limit (mW/cm2)	Gain according to EIRP(ERP) (dBi)	Gain according to Pd (dBi)	Max Gain Allowed (dBi)	conclusion
LTE/CA Band 2	1850.7	4.10	24.00	28.10	33.00	0.1284	1.0000	9.00	13.01	9.00	Pass
LTE Band 4	1710.7	5.00	24.00	29.00	30.00	0.1580	1.0000	6.00	13.01	6.00	Pass
LTE/CA Band 5	824.7	-0.50	24.00	21.35	38.45	0.0445	0.5498	16.60	10.41	10.41	Pass
LTE/CA Band 7	2502.5	-2.50	24.00	21.50	33.00	0.0281	1.0000	9.00	13.01	9.00	Pass
LTE/CA Band 12	699.7	-1.50	24.00	20.35	34.77	0.0354	0.4665	12.92	9.70	9.70	Pass
LTE Band 13	779.5	1.60	24.00	23.45	34.77	0.0722	0.5197	12.92	10.16	10.16	Pass
LTE Band 14	790.5	1.50	24.00	23.35	34.77	0.0706	0.5270	12.92	10.23	10.23	Pass
LTE Band 17	706.5	-2.10	24.00	19.75	34.77	0.0308	0.4710	12.92	9.74	9.74	Pass
LTE Band 25	1852.5	4.30	24.00	28.30	33.00	0.1345	1.0000	9.00	13.01	9.00	Pass
LTE Band 26 (814-824)	817.0	-0.50	24.00	21.35	NA	0.0445	0.5447	NA	10.37	10.37	Pass
LTE Band 26 (824-849)	824.7	-0.50	24.00	21.35	38.45	0.0445	0.5498	16.60	10.41	10.41	Pass
LTE/CA Band 41	2498.5	2.90	24.00	26.90	33.00	0.0974	1.0000	9.00	13.01	9.00	Pass
LTE/CA Band 41 (PC2)	2498.5	2.90	26.00	28.90	33.00	0.1544	1.0000	7.00	11.01	7.00	Pass
LTE/CA Band 48	3552.5	-3.00	24.00	21.00	23.00	0.0250	1.0000	-1.00	13.01	-1.00	Pass
LTE/CA Band 66	1710.7	5.00	24.00	29.00	30.00	0.1580	1.0000	6.00	13.01	6.00	Pass
LTE Band 71	665.5	-2.00	24.00	19.85	34.77	0.0315	0.4437	12.92	9.48	9.48	Pass
NR Band n2	1852.5	4.10	24.00	28.10	33.00	0.1284	1.0000	9.00	13.01	9.00	Pass
NR Band n5	826.5	-0.50	24.00	21.35	38.45	0.0445	0.5510	16.60	10.42	10.42	Pass
NR Band n7	2502.5	-2.50	24.00	21.50	33.00	0.0281	1.0000	9.00	13.01	9.00	Pass
NR Band n12	701.5	-1.50	24.00	20.35	34.77	0.0354	0.4677	12.92	9.71	9.71	Pass
NR Band n13	779.5	1.60	24.00	23.45	34.77	0.0722	0.5197	12.92	10.16	10.16	Pass
NR Band n14	790.5	1.50	24.00	23.35	34.77	0.0706	0.5270	12.92	10.23	10.23	Pass
NR Band n25	1852.5	4.30	24.00	28.30	33.00	0.1345	1.0000	9.00	13.01	9.00	Pass
NR Band n26 (814-824)	816.5	-0.50	24.00	21.35	NA	0.0445	0.5443	NA	10.37	10.37	Pass
NR Band n26 (824-849)	826.5	-0.50	24.00	21.35	38.45	0.0445	0.5510	16.60	10.42	10.42	Pass
NR Band n38	2575.00	3.00	24.00	27.00	33.00	0.0997	1.0000	9.00	13.01	9.00	Pass
NR Band n41	2501.01	2.90	24.00	26.90	33.00	0.0974	1.0000	9.00	13.01	9.00	Pass
NR Band n48	3555.0	-3.00	24.00	21.00	23.00	0.0250	1.0000	-1.00	13.01	-1.00	Pass
NR Band n66	1712.5	5.00	24.00	29.00	30.00	0.1580	1.0000	6.00	13.01	6.00	Pass
NR Band n71	665.5	-2.00	24.00	19.85	34.77	0.0315	0.4437	12.92	9.48	9.48	Pass

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/cm2)	Limit (mW/cm2)	Gain according to EIRP(ERP) (dBi)	Gain according to Pd (dBi)	Max Gain Allowed (dBi)	conclusion
NR Band n77 (3450-3550)	3455.0	2.90	24.00	26.90	30.00	0.0974	1.0000	6.00	13.01	6.00	Pass
NR Band n77 (3450-3550) (PC2)	3455.0	2.90	26.00	28.90	30.00	0.1544	1.0000	4.00	11.01	4.00	Pass
NR Band n77 (3700-3980)	3707.5	2.90	24.00	26.90	30.00	0.0974	1.0000	6.00	13.01	6.00	Pass
NR Band n77 (3700-3980) (PC2)	3707.5	2.90	26.00	28.90	30.00	0.1544	1.0000	4.00	11.01	4.00	Pass
NR Band n78 (3450-3550)	3455.0	2.90	24.00	26.90	30.00	0.0974	1.0000	6.00	13.01	6.00	Pass
NR Band n78 (3450-3550) (PC2)	3455.0	2.90	26.00	28.90	30.00	0.1544	1.0000	4.00	11.01	4.00	Pass
NR Band n78 (3700-3800)	3705.0	2.90	24.00	26.90	30.00	0.0974	1.0000	6.00	13.01	6.00	Pass
NR Band n78 (3700-3800) (PC2)	3705.0	2.90	26.00	28.90	30.00	0.1544	1.0000	4.00	11.01	4.00	Pass

Due to the EUT support NR ENDC and CA
Both LTE and NR/LTE band can transmit simultaneously, the formula of the calculated the MPE is:

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

NOTE The corresponding MEs must be expressed in terms of power density in the above summation
Therefore, the worst-case(CA_66B/66C) situation is 0.158+0.158=0.316,which is less than “1”,
this confirmed that the device comply with MPE limit.

---End of Report---