

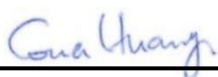
RF EXPOSURE EVALUATION REPORT

FCC ID : 2AX2URW350RGL
Equipment : 5G module
Brand Name : Rolling Wireless
Model Name : RW350R-GL
Applicant : Rolling Wireless S.a.r.l.
8-10, rue Mathias Hardt 1717, Luxembourg
Standard : 47 CFR Part 2.1091

We, SPORTON INTERNATIONAL INC has been evaluated this product in accordance with 47 CFR Part2.1091 and it complies with applicable limit.

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code: 3786) and the FCC designation No. TW3786 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC evaluation.

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Approved by: Cona Huang / Deputy Manager



SPORTON INTERNATIONAL INC. Wensan Laboratory

No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan



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History of this test report

Report No.	Version	Description	Issued Date
FA3N3015-15	Rev. 01	Initial issue of report	Mar. 19, 2025

**1. Description of Equipment Under Test (EUT)**

Product Feature & Specification	
EUT Type	5G module
Brand Name	Rolling Wireless
Model Name	RW350R-GL
FCC ID	2AX2URW350RGL
Wireless Technology and Frequency Range	WCDMA Band II: 1850 MHz ~ 1910 MHz WCDMA Band IV: 1710 MHz ~ 1755 MHz WCDMA Band V: 824 MHz ~ 849 MHz LTE Band 2: 1850 MHz ~ 1910 MHz LTE Band 4: 1710 MHz ~ 1755 MHz LTE Band 5: 824 MHz ~ 849 MHz LTE Band 7: 2500 MHz ~ 2570 MHz LTE Band 12: 699 MHz ~ 716 MHz LTE Band 13: 777 MHz ~ 787 MHz LTE Band 14: 788 MHz ~ 798 MHz LTE Band 17: 704 MHz ~ 716 MHz LTE Band 25: 1850 MHz ~ 1915 MHz LTE Band 26: 814 MHz ~ 849 MHz LTE Band 30: 2305 MHz ~ 2315 MHz LTE Band 38: 2570 MHz ~ 2620 MHz LTE Band 41: 2496 MHz ~ 2690 MHz LTE Band 42: 3450 MHz ~ 3600 MHz LTE Band 43: 3600 MHz ~ 3700 MHz LTE Band 48: 3550 MHz ~ 3700 MHz LTE Band 66: 1710 MHz ~ 1780 MHz LTE Band 71: 663 MHz ~ 698 MHz 5G NR n2 : 1850 MHz ~ 1910 MHz 5G NR n5 : 824 MHz ~ 849 MHz 5G NR n7 : 2500 MHz ~ 2570 MHz 5G NR n12 : 699 MHz ~ 716 MHz 5G NR n14 : 788 MHz ~ 798 MHz 5G NR n25 : 1850 MHz ~ 1915 MHz 5G NR n26 : 814 MHz ~ 849 MHz 5G NR n30 : 2305 MHz ~ 2315 MHz 5G NR n38 : 2570 MHz ~ 2620 MHz 5G NR n41 : 2496 MHz ~ 2690 MHz 5G NR n48 : 3550 MHz ~ 3700 MHz 5G NR n66 : 1710 MHz ~ 1780 MHz 5G NR n71 : 663 MHz ~ 698 MHz 5G NR n77: 3700 MHz ~ 3980 MHz, 3450 MHz ~ 3550 MHz 5G NR n78: 3700 MHz ~ 3800 MHz, 3450 MHz ~ 3550 MHz
Mode	RMC 12.2Kbps HSDPA HSUPA DC-HSDPA HSPA+ (16QAM uplink) LTE: QPSK, 16QAM, 64QAM, 256QAM 5G NR: DFT-s-OFDM/CP-OFDM, Pi/2 BPSK/QPSK/16QAM/64QAM/256QAM

Host Information	
Equipment Name	Notebook PC
Brand Name	HP
Model Name	HSN-Q40C
EUT Stage	Production Unit

Reviewed by: Jason Wang**Report Producer: Carlie Tsai**

<Vendor 1 for RW350R-GL_Thin>

Communication System	Band	Frequency(MHz) from low to high spectrum		1A Part Number for Antenna Assembly	1B Antenna Manufacturer Name	1C Description of Antenna Type	1D Tx Antenna Gain (dBi) Ant5
5G NR FR1	2	1850	1910	Ant5 : DQ602350601 (350-23506)	Vendor 1	PIFA	-0.67
WCDMA/ LTE/5G NR FR1	5	824	849				-3.08
LTE/5G NR FR1	12	699	716				-1.19
LTE	13	777	787				-1.09
LTE/5G NR FR1	14	788	798				-1.98
LTE	17	704	716				-1.19
5G NR FR1	25	1850	1915				-0.67
LTE/5G NR FR1	26	814	849				-2.28
LTE/5G NR FR1	41	2496	2690				0.89
LTE	42	3400	3600				0.12
LTE/5G NR FR1	48	3550	3700				0.25
LTE/5G NR FR1	71	663	698				-4.03
5G NR FR1	77	3300	4200				2.66
5G NR FR1	78	3300	3800				-0.66

Communication System	Band	Frequency(MHz) from low to high spectrum		1A Part Number for Antenna Assembly	1B Antenna Manufacturer Name	1C Description of Antenna Type	1D Tx Antenna Gain (dBi) Ant8
WCDMA/LTE/5G NR FR1	2	1850	1910	Ant8 : DQ602350601 (350-23506)	Vendor 1	PIFA	0.01
WCDMA/LTE	4	1710	1755				-1.24
LTE/5G NR FR1	7	2500	2570				-0.91
LTE/5G NR FR1	25	1850	1915				0.01
LTE/5G NR FR1	30	2305	2315				-0.77
LTE/5G NR FR1	38	2570	2620				-0.75
LTE/5G NR FR1	41	2496	2690				-0.85
LTE	42	3400	3600				-2.36
LTE	43	3600	3800				-1.72
LTE/5G NR FR1	48	3550	3700				-2.01
LTE/5G NR FR1	66	1710	1780				-0.03
5G NR FR1	77	3300	4200				-0.90
5G NR FR1	78	3300	3800				-1.72

<Vendor 1 for RW350R-GL_Thick>

Communication System	Band	Frequency(MHz) from low to high spectrum		1A Part Number for Antenna Assembly	1B Antenna Manufacturer Name	1C Description of Antenna Type	1D Tx Antenna Gain (dBi) Ant5
5G NR FR1	2	1850	1910	Ant5 : DQ602350501 (350-23505)	Vendor 1	PIFA	-0.09
WCDMA/ LTE/5G NR FR1	5	824	849				-2.83
LTE/5G NR FR1	12	699	716				-0.66
LTE	13	777	787				-0.23
LTE/5G NR FR1	14	788	798				-1.41
LTE	17	704	716				-0.66
5G NR FR1	25	1850	1915				-0.09
LTE/5G NR FR1	26	814	849				-2.55
LTE/5G NR FR1	41	2496	2690				0.82
LTE	42	3400	3600				0.31
LTE/5G NR FR1	48	3550	3700				0.56
LTE/5G NR FR1	71	663	698				-1.78
5G NR FR1	77	3300	4200				2.76
5G NR FR1	78	3300	3800				-0.26

Communication System	Band	Frequency(MHz) from low to high spectrum		1A Part Number for Antenna Assembly	1B Antenna Manufacturer Name	1C Description of Antenna Type	1D Tx Antenna Gain (dBi) Ant8
WCDMA/LTE/5G NR FR1	2	1850	1910	Ant8 : DQ602350501 (350-23505)	Vendor 1	PIFA	1.39
WCDMA/LTE	4	1710	1755				0.76
LTE/5G NR FR1	7	2500	2570				-0.67
LTE/5G NR FR1	25	1850	1915				1.39
LTE/5G NR FR1	30	2305	2315				-0.62
LTE/5G NR FR1	38	2570	2620				-0.25
LTE/5G NR FR1	41	2496	2690				0.04
LTE	42	3400	3600				-0.43
LTE	43	3600	3800				-0.1
LTE/5G NR FR1	48	3550	3700				-1.65
LTE/5G NR FR1	66	1710	1780				-0.67
5G NR FR1	77	3300	4200				0.08
5G NR FR1	78	3300	3800				-0.1

2. Maximum RF average output power among production units

Mode		Maximum Average power(dBm)
WCDMA	Band II	24.50
	Band IV	24.50
	Band V	24.50
LTE	Band 2	24.00
	Band 4	24.00
	Band 5	24.00
	Band 7	24.00
	Band 12	24.00
	Band 13	24.00
	Band 14	24.00
	Band 17	24.00
	Band 25	24.00
	Band 26	24.00
	Band 30	23.00
	Band 38	24.00
	Band 41	24.00
	Band 42	22.00
	Band 43	22.00
	Band 48	22.00
	Band 66	24.00
	Band 71	24.00
5G NR	n2	24.00
	n5	24.00
	n7	24.00
	n12	24.00
	n14	24.00
	n25	24.00
	n26	24.00
	n30	23.00
	n38	24.00
	n41	24.00
	n41_HPUE	27.00
	n48	22.00
	n66	24.00
	n71	24.00
	n77	24.00
	n77_HPUE	27.00
	n78	24.00
	n78_HPUE	27.00



3. RF Exposure Limit Introduction

According to ANSI/IEEE C95.1-1992, the criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in §1.1310.

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	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/f ²)	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/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500			f/1500	30
1500-100,000			1.0	30

The MPE was calculated at 20 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

$$S = \frac{PG}{4\pi R^2}$$

Where:

S = Power Density

P = Output Power at Antenna Terminals

G = Gain of Transmit Antenna (linear gain)

R = Distance from Transmitting Antenna

4. Radio Frequency Radiation Exposure Evaluation

Band	Antenna Gain (dBi)	Maximum Power (dBm)	Maximum EIRP (dBm)	Maximum EIRP (W)	Maximum PG (mW)	Power Density at 20cm (mW/cm ²)	Limit (mW/cm ²)
WCDMA Band 2	1.39	24.50	25.890	0.388	388.150	0.077	1.000
WCDMA Band 4	0.76	24.50	25.260	0.336	335.738	0.067	1.000
WCDMA Band 5	-2.83	24.50	21.670	0.147	146.893	0.029	0.549
LTE Band 2	1.39	24.00	25.390	0.346	345.939	0.069	1.000
LTE Band 4	0.76	24.00	24.760	0.299	299.226	0.060	1.000
LTE Band 5	-2.83	24.00	21.170	0.131	130.918	0.026	0.549
LTE Band 7	-0.67	24.00	23.330	0.215	215.278	0.043	1.000
LTE Band 12	-0.66	24.00	23.340	0.216	215.774	0.043	0.466
LTE Band 13	-0.23	24.00	23.770	0.238	238.232	0.047	0.518
LTE Band 14	-1.41	24.00	22.590	0.182	181.552	0.036	0.525
LTE Band 17	-0.66	24.00	23.340	0.216	215.774	0.043	0.469
LTE Band 25	1.39	24.00	25.390	0.346	345.939	0.069	1.000
LTE Band 26	-2.28	24.00	21.720	0.149	148.594	0.030	0.543
LTE Band 30	-0.62	23.00	22.380	0.173	172.982	0.034	1.000
LTE Band 38	-0.25	24.00	23.750	0.237	237.137	0.047	1.000
LTE Band 41	0.89	24.00	24.890	0.308	308.319	0.061	1.000
LTE Band 42	0.31	22.00	22.310	0.170	170.216	0.034	1.000
LTE Band 43	-0.10	22.00	21.900	0.155	154.882	0.031	1.000
LTE Band 48	0.56	22.00	22.560	0.180	180.302	0.036	1.000
LTE Band 66	-0.03	24.00	23.970	0.249	249.459	0.050	1.000
LTE Band 71	-1.78	24.00	22.220	0.167	166.725	0.033	0.442
FR1 Band n2	1.39	24.00	25.390	0.346	345.939	0.069	1.000
FR1 Band n5	-2.83	24.00	21.170	0.131	130.918	0.026	0.549
FR1 Band n7	-0.67	24.00	23.330	0.215	215.278	0.043	1.000
FR1 Band n12	-0.66	24.00	23.340	0.216	215.774	0.043	0.466
FR1 Band n14	-1.41	24.00	22.590	0.182	181.552	0.036	0.525
FR1 Band n25	1.39	24.00	25.390	0.346	345.939	0.069	1.000
FR1 Band n26	-2.28	24.00	21.720	0.149	148.594	0.030	0.543
FR1 Band n30	-0.62	23.00	22.380	0.173	172.982	0.034	1.000
FR1 Band n38	-0.25	24.00	23.750	0.237	237.137	0.047	1.000
FR1 Band n41	0.89	24.00	24.890	0.308	308.319	0.061	1.000
FR1 Band n41_HPUE	0.89	27.00	27.890	0.615	615.177	0.122	1.000
FR1 Band n48	0.56	22.00	22.560	0.180	180.302	0.036	1.000
FR1 Band n66	-0.03	24.00	23.970	0.249	249.459	0.050	1.000
FR1 Band n71	-1.78	24.00	22.220	0.167	166.725	0.033	0.442
FR1 Band n77	2.76	24.00	26.760	0.474	474.242	0.094	1.000
FR1 Band n77_HPUE	2.76	27.00	29.760	0.946	946.237	0.188	1.000
FR1 Band n78	-0.10	24.00	23.900	0.245	245.471	0.049	1.000
FR1 Band n78_HPUE	-0.10	27.00	26.900	0.490	489.779	0.097	1.000

Conclusion:

According to 47 CFR §2.1091, the RF exposure analysis concludes that the RF Exposure is FCC compliant.