

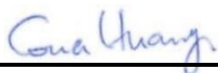
RF EXPOSURE EVALUATION REPORT

FCC ID : GKRRMLN2X
Equipment : LGA Module
Brand Name : COMPAL
Model Name : RML-N2x
Marketing Name : RML-N2x
Applicant : Compal Electronics, Inc.
No.581 & 581-1, Ruiguang Rd., Neihu District,
Taipei, (114) Taiwan
Manufacturer : Compal Electronics, Inc.
No.581 & 581-1, Ruiguang Rd., Neihu District,
Taipei, (114) Taiwan
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: 1190) and the FCC designation No. TW1190 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC evaluation.

The results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. Laboratory, the test report shall not be reproduced except in full



Approved by: Cona Huang / Deputy Manager



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History of this test report

Report No.	Version	Description	Issued Date
FA482804-01	Rev. 01	Initial issue of report	Oct. 23, 2024

1. Description of Equipment Under Test (EUT)

Product Feature & Specification	
EUT Type	LGA Module
Brand Name	COMPAL
Model Name	RML-N2x
Marketing Name	RML-N2x
FCC ID	GKRRMLN2X
Wireless Technology and Frequency Range	5G NR n66 : 1710 MHz ~ 1780 MHz 5G NR n70 : 1695 MHz ~ 1710 MHz 5G NR n71 : 663 MHz ~ 698 MHz
Mode	5G NR: DFT-s-OFDM/CP-OFDM, Pi/2 BPSK/QPSK/16QAM/64QAM/256QAM

Reviewed by: Jason Wang

Report Producer: Daisy Peng

2. Maximum RF average output power among production units

Band		Maximum Tune-up Power (dBm)
FR1	n66	25
	n66_MIMO	28
	n70	25
	n70_MIMO	28
	n71	25
	n71_MIMO	28



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

4.1. Standalone Power Density Calculation

Band	Antenna Gain (dBi)	Maximum Power (dBm)	Maximum ERP (dBm)	Maximum ERP (W)	Maximum EIRP (dBm)	Maximum EIRP (W)	Maximum ERP Limit (W)	Maximum EIRP Limit (W)	Maximum PG (mW)	Power Density at 20cm (mW/cm ²)	Limit (mW/cm ²)
FR1 Band n66	2.00	25.00	24.850	0.305	27.000	0.501		1.000	501.187	0.100	1.000
FR1 Band n66_MIMO	2.00	28.00	27.850	0.610	30.000	1.000		1.000	1000.000	0.199	1.000
FR1 Band n70	2.00	25.00	24.850	0.305	27.000	0.501		1.000	501.187	0.100	1.000
FR1 Band n70_MIMO	2.00	28.00	27.850	0.610	30.000	1.000		1.000	1000.000	0.199	1.000
FR1 Band n71	2.00	25.00	24.850	0.305	27.000	0.501	3.000		501.187	0.100	0.442
FR1 Band n71_MIMO	2.00	28.00	27.850	0.610	30.000	1.000	3.000		1000.000	0.199	0.442

Conclusion:

Based on FCC 47 CFR §2.1091, the analysis concludes that this product when transmitting in standalone within a host device, is compliant with the FCC RF exposure requirements in mobile exposure condition, provided the conducted power and antenna gain do not exceed the limits for each given frequency band per wireless technology as follow table:

Device	Technology	Band	Maximum Conducted Power (dBm)	Standalone Maximum Antenna Gain (dBi)
RML-N2x	FR 1	n66	25	2
		n66_MIMO	28	2
		n70	25	2
		n70_MIMO	28	2
		n71	25	2
		n71_MIMO	28	2