RF Exposure Report (FCC)

Report No.:	WIR108236 -FCC-RF Exposure-Tracker
Test Model:	TRACKER01
FCC ID:	2A2TKTRACKER01
Received Date:	06 /03 /2022
Test Date:	06 /04/ 2022 – 08 /28 /2022
Issued Date:	08/ 28/ /2022
Applicant:	Rooster, LLC
Address:	7500 College Blvd Suite 775, Overland Park, KS 66210
Issued By:	Eurofins Electrical and Electronic Testing NA, Inc.
Lab Address:	3162 Belick St. Santa Clara CA, 95054

1. Certificate of Conformity

Product: Rooster Tracker
Brand: Rooster
Test Model: TRACKER01
Series Model: N/A
Sample Status: Engineering Sample
Applicant: Rooster, LLC
Test Date: 06 /02/ 2022 – 08 /28 /2022
Standard: 47 CFR FCC Part 2.1093

Christopher Martin
Test Engineer, Wireless Laboratory

Engineering Statement: The measurements shown in this report were made in accordance with the procedures indicated, and the emissions from this equipment were found to be within the limits applicable. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them. It is further stated that upon the basis of the measurements made.

Gary Chou
Gary Chou
Wireless Engineering Manager, Wireless Laboratory

Revision	Report Date	Reason for Revision
∅	August 28, 2022	Initial Issue.

2. RF Exposure

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm^2)	Average Time (minutes)
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

f = Frequency in MHz; *Plane-wave equivalent power density

2.1 MPE Calculation Formula

$Pd = (Pout*G) / (4*pi*r^2)$

Where

Pd = power density in mW/cm^2

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

2.2 Antenna Gain

Lora:
Antenna Type: Narrow-band FPCB Antenna
Antenna Gain: -4.5 dBi

2.3 Calculation Result of Worst Case Maximum Conducted Power

Type/ Band	Frequency Band (MHz)	Max Power (tune up) (dBm)	Max Power (tune up) (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
Lora	916.5	-5.98	0.2523	-4.5	20	0.000018	0.611

Note:
1. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
2. This device contains

TYPE	Model No.	FCC ID	Note
-	-	-	-

3. Conclusion

Conclusion:
The formula of calculated the MPE is:
CPD1 / LPD1 + CPD2 / LPD2 + ……etc. < 1
CPD = Calculation power density
LPD = Limit of power density

Worse case
Total MPE Percentage for
t = 0.0000294599< 1

Therefore, the maximum calculations of above situations are less than the "1" limit.
The SAR evaluation is not required.

