

TEST REPORT

FCC Rules Part 15.231e

Report Reference No.....: MTEB24010067-H

FCC ID..... : 2A9G9-HD962

Compiled by

(position+printed name+signature)..: File administrators Alisa Luo



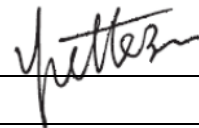
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Date of issue.....: Jan. 08,2024

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People's Republic of China

Applicant's name.....: Thin Air Brands, LLC

Address: 5332 Talavera Place, Parker, CO 80134, USA

Test specification/ Standard 47 CFR Part 1.1307
47 CFR Part 2.1093

TRF Originator.....: Shenzhen Most Technology Service Co., Ltd.

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Test item description Hyper Drive RC Shark

Trade Mark: N/A

Model/Type reference.....: HD962

Listed Models: N/A

Modulation Type.....: GFSK

Operation Frequency.....: 2410-2470MHz

Hardware Version.....: V1.0

Software Version: V1.0

Rating: 3VDC (AA * 2)

Result.....: **PASS**

TEST REPORT

Equipment under Test : Hyper Drive RC Shark

Model /Type : HD962

Listed Models : N/A

Remark : N/A

Applicant : **Thin Air Brands, LLC**

Address : 5332 Talavera Place, Parker, CO 80134, USA

Manufacturer : /

Address : /

Test Result:	PASS
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The test report merely corresponds to the test sample.

It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

Contents

1. Revision History

Revision	Issue Date	Revisions	Revised By
00	2024.01.08	Initial Issue	Alisa Luo

2.1 RF Exposure Compliance Requirement

2.1.1 Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v06

4.3.1. Standalone SAR test exclusion considerations

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

2.1.2 Limits

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

$$\left[\frac{\text{max. power of channel, including tune-up tolerance, mW}}{(\text{min. test separation distance, mm})} \right] \cdot$$

$$\left[\sqrt{f(\text{GHz})} \right] \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR, where}$$

$f(\text{GHz})$ is the RF channel transmit frequency in GHz

Power and distance are rounded to the nearest mW and mm before calculation¹⁷

The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion

2.1.3 EUT RF Exposure

$$\text{EIRP} = \text{PT} * \text{GT} = (\text{E} \times \text{D})^2 / 30$$

where:

PT = transmitter output power in watts,

GT = numeric gain of the transmitting antenna (unitless),

E = electric field strength in V/m, $10^{(\text{dB}\mu\text{V/m})/20} / 10^6$,

D = measurement distance in meters (m)---3m,

So $\text{PT} = (\text{E} \times \text{D})^2 / 30 / \text{GT}$

The worst case (refer to report MTEB24010067-R) is below:

Antenna polarization: Horizontal		
Frequency (MHz)	Level (dBuV/m)	Polarization
2410	83.45	Peak
2410	63.34	Average

Antenna polarization: Vertical		
Frequency (MHz)	Level (dBuV/m)	Polarization
2410	83.85	Peak
2410	63.58	Average

For 2410MHz wireless:

Field strength=83.85dBuV/m

Ant gain:1dBi;so Ant numeric gain=1.26

$$\text{EIRP} = \text{PT} * \text{GT} = (\text{E} \times \text{D})^2 / 30 = (10^{(\text{dB}\mu\text{V/m})/20} / 10^6 * 3)^2 / 30 = 0.0000705\text{W}$$

$$\text{So PT} = \text{EIRP} / \text{GT} = 0.0000705\text{W} / 1.26 * 1000 = 0.056\text{mW}$$

$$\text{So } (0.056\text{mW} / 5\text{mm}) * \sqrt{2.410\text{GHz}} = 0.01736$$

exclusion=0.1736<3.0 for 1-g SAR

So the SAR report is not required.