

REM-EMIESS24D491PAR-01Av0

MPE test report

According to the standard:

CFR 47 FCC PART 15

Equipment under test:

ANAFI UKR

FCC ID: *2AG6IANAFI3*

Company:

PARROT

Distribution: Mr Guerrab

(Company: PARROT)

Number of pages: 6

Ed.	Date	Modified Page(s)	Technical Verification and Quality Approval	
			Name and Function	Visa
0	14-Jan-25	Creation	B. VOVARD, Radio Technician	<i>p/a</i> 

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Information in italics are declared by the manufacturer/customer and are under his responsibility

DESIGNATION OF PRODUCT: *ANAFI UKR*

Serial number (S/N): *PI040461AB4F000154*

Reference / model (P/N): *ANAFI UKR*

Software version: *8.1.0 beta2*

MANUFACTURER: *PARROT*

COMPANY SUBMITTING THE PRODUCT:

Company: PARROT

Address: 174, Quai de Jemmapes
75010 PARIS
FRANCE

Responsible: Mr Guerrab

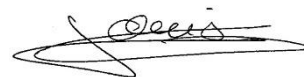
Person present during the tests: Mr Guerrab

DATE(S) OF TEST: From 30-Sep-24 to 10-Dec-24

TESTING LOCATION: EMITECH ANGERS laboratory at JUIGNE SUR LOIRE (49) FRANCE
FCC Accredited under US-EU MRA Designation Number: FR0009
Test Firm Registration Number: 873677

TESTED BY: S. LOUIS

VISA:

A handwritten signature in black ink, appearing to read "Dees", with a large, stylized flourish underneath.

WRITTEN BY: S. LOUIS

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REVISIONS HISTORY

Revision	Date	Modified pages	Modifications
0	9-Jan-25	/	Creation

1. INTRODUCTION

This report presents the results of partial radio test carried out on the following radio equipment: **ANAFI UKR**, in accordance with normative reference.

The equipment under test integrates:

- Proprietary protocol MARS 2.4 GHz transceiver radio function not already certified,
- Lora transceiver radio part module already certified referenced '**LBAA0QB1SJ**', (FCC ID: VPYLBAA0QB1SJ / IC:772C-LBAA0QB1SJ).
- GNSS multifrequencies receiver.

The applicant declared that this radio is not operational during charging mode.

2. PRODUCT DESCRIPTION

Mars 2.4GHz radio protocol:

Class:	B
Utilization:	Mobile
Antenna type and gain:	0.6 dBi / integral antenna
Operating frequency band:	From 2414 MHz to 2468 MHz
Number of channels:	55
Channel spacing:	1MHz
Nominal Channel bandwidth:	9MHz
Power settings:	09

LoRa radio protocol:

Category of equipment (ISED):	I
Class:	B
Utilization:	Residential
Antenna type and gain:	- 0.6 dBi / integral antenna
Operating frequency range:	From 900 MHz to 928 MHz
Nominal Operating Frequencies:	FHSS: Tx => 902.3 to 914.9 MHz (64 channels) DTS: Tx => 903 to 914.2 MHz (8 channels) Rx => 923.3 to 927.5MHz (8 channels)
Channel spacing:	200 kHz for Tx => 902.3 to 914.9 MHz 600 kHz for Tx => 903 to 914.2 MHz and Rx => 923.3 to 927.5 MHz
Nominal Channel bandwidth:	250 kHz
Power settings:	18
Power source:	11.55Vdc by Lithium-ion rechargeable battery

Power level, frequency range and channels characteristics are not user adjustable.
The details pictures of the product and the circuit boards are joined with this file.

3. NORMATIVE REFERENCE

The standards and testing methods related throughout this report are those listed below.
They are applied on the whole test report even though the extensions (version, date and amendment) are not repeated.

CFR 47 (2024)	Radio Frequency Devices
ANSI C63.10	2013 Procedures for Compliance Testing of Unlicensed Wireless Devices.
447498 D04 Interim General RF Exposure Guidance v01	RF Exposure Procedures and Equipment Authorization Policies for Mobile and Portable Devices

4. RF EXPOSURE

Calculus for Radio Mars 2.4GHz in standalone

In accordance with KDB 447498 D04 Interim General RF Exposure Guidance v01, paragraph 1.4.2 :

Maximum Permissive Exemption according paragraph 1.1310(d)(2) of CFR 47 FCC Part 15

Maximum measured power = 119.2 dBμV/m = 0.250 W at 2414 MHz

with $P = (E \times d)^2 / (30 \times G_p)$ with $d = 3$ m and $G_p = 1$

$$PSD = EIRP / (4 \times \pi \times R^2)$$

$$\Rightarrow 250 / (4 \times \pi \times (20 \text{ cm})^2) = 0.05 \text{ mW/cm}^2 \text{ (limit = 1 mW/cm}^2\text{)}$$

The MPE ratio is then calculated for the simultaneous transmission.

$$\text{MPE ratio (Mars 2.4GHz)} = 0.05 / 1 = 0.05$$

The equipment fulfils the requirements on power density for general population/uncontrolled exposure and therefore fulfils the requirements of 47 CFR §1.1310.

Calculus for LoRa in standalone

According to Murata test report N° RKSA210416001-00B,

$$PSD = 0.0397 \text{ mW/cm}^2 \text{ (limit=0.60 mW/cm}^2\text{)}$$

The MPE ratio is then calculated for the simultaneous transmission.

$$\text{MPE ratio (LoRa)} = 0.0397 / 0.60 = 0.066$$

The equipment fulfils the requirements on power density for general population and therefore fulfils the requirements of 47 CFR §1.1310.

Calculus for simultaneous transmission

$$\sum \text{ of MPE ratio} = \text{MPE ratio(Mars 2.4GHz)} + \text{MPE ratio(LoRa)} = 0.05 + 0.066 = 0.116 \leq 1.0$$

The product meet the requirement for Simultaneous transmission MPE test exclusion from §2.2 of KDB 447498