



RF TEST REPORT

Product Name: Petcube GPS Tracker

Model Name: PT10US

FCC ID: 2AK4CPT10US

Issued For : Petcube, Inc.

251 Little Falls Drive Wilmington DE 19808 USA

Issued By : Shenzhen LGT Test Service Co., Ltd.

Room 205, Building 13, Zone B, Zhenxiong Industrial Park,
No.177, Renmin West Road, Jinsha, Kengzi Street, Pingshan
District, Shenzhen, Guangdong, China

Report Number: LGT23I001HA01

Sample Received Date: Sep. 04, 2023

Date of Test: Sep. 04, 2023 – Sep. 13, 2023

Date of Issue: Sep. 13, 2023

The test report is effective only with both signature and specialized stamp. This report shall not be reproduced except in full without the written approval of the Laboratory. The results in this report only apply to the tested sample.



TEST REPORT CERTIFICATION

Applicant: Petcube, Inc.
Address: 251 Little Falls Drive Wilmington DE 19808 USA
Manufacturer: Petcube, Inc.
Address: 251 Little Falls Drive Wilmington DE 19808 USA
Product Name: Petcube GPS Tracker
Trademark: Petcube
Model Name: PT10US
Sample Status: Normal

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC 47 CFR §2.1091 KDB 447498 D01 General RF Exposure Guidance v06	PASS

Prepared by:

Zane Shan

Zane Shan
Engineer

Approved by:

Vita Li

Vita Li
Technical Director





TABLE OF CONTENTS

1 . GENERAL INFORMATION	5
1.1 GENERAL DESCRIPTION OF THE EUT	5
1.2 TEST LABORATORY	5
2 . FCC 47CFR §2.1091 REQUIREMENT	6
2.1 TEST STANDARDS	6
2.2 LIMIT	6
2.3 EUT OPERATION CONDITION	6
2.4 CLASSIFICATION	6
2.5 TEST RESULT	7



Revision History

Rev.	Issue Date	Revisions
00	Sep. 13, 2023	Initial Issue



1. GENERAL INFORMATION

1.1 GENERAL DESCRIPTION OF THE EUT

Product Name:	Petcube GPS Tracker	
Trademark:	Petcube	
Model Name:	PT10US	
Series Model:	N/A	
Model Difference:	N/A	
	LTE	LTE-HD-FDD:B2/B4/B5/B12/B13/B25/B26/B66
	Bluetooth	2402-2480MHz
Rating:	DC 3.6V~4.2V 2.5A, 5W	
Battery:	Rated Voltage: 3.7V	
Hardware Version:	V1.1	
Software Version:	PETC_V01	

1.2 TEST LABORATORY

Company Name:	Shenzhen LGT Test Service Co., Ltd.
Address:	Room 205, Building 13, Zone B, Zhenxiong Industrial Park, No.177, Renmin West Road, Jinsha, Kengzi Street, Pingshan District, Shenzhen, Guangdong, China
Accreditation Certificate	A2LA Certificate No.: 6727.01
	FCC Registration No.: 746540
	CAB ID: CN0136



2. FCC 47CFR §2.1091 REQUIREMENT

2.1 TEST STANDARDS

The limit for Maximum Permissible Exposure (MPE) specified in FCC 1.1310 is followed. The gain of the antennas used in the product is extracted from the Antenna data sheets provided and also the maximum total power input to the antenna is measured. Through the Friis transmission formula and the maximum gain of the antenna, we can calculate the distance, away from the product, where the limit of MPE is reached.

Although the Friis Transmission formula is far field assumption, the calculated result of that is an over-prediction for near field power density. It is taken as worst case to specify the safety range.

2.2 LIMIT

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environmental impact of the human exposure to radio-frequency (RF) radiation as specified in 1.1307 (b)

Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)
Limits for Occupational / controlled Exposures			
300 - 1500	--	--	F/300
1500 – 100000	--	--	5.0
Limits for General population / Uncontrolled Exposure			
300 - 1500	--	--	F/1500
1500 – 100000	--	--	1.0

F= Frequency in MHz

Friss Formula

Friss Transmission Formula: $Pd = (Pout * G) / (4 * \pi * r^2)$

Where

Pd = power density in mW/cm²

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

R = Distance between observation point and the center of radiator in cm

If we know the maximum gain of the antenna and the total output power to the antenna, through calculation, we will know MPE value at distance 20cm.

2.3 EUT OPERATION CONDITION

EUT was enabled to transmit and receive at lowest, middle and highest channels.

2.4 CLASSIFICATION

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. Warning statement to the user for keeping at least 20cm or more separation distance from the antenna should be included in the User manual. So, this device is classified as Mobile device.



2.5 TEST RESULT

Turn up Result

Mode	Turn up Power(dBm)
BLE 1M	-4.5±1
BLE 2M	-4.5±1
Band 2	25.7
Band 4	25.7
Band 5	25.7
Band 12	25.7
Band 13	25.7
Band 25	25.7
Band 26	25.7
Band 66	25.7



The MPE result of worst mode:

RF Function	Frequency (MHz)	Max Turn up Power (dBm)	Max Power (mW)	ANT Gain (dBi)	ANT Gain (gain of antenna in linear scale)	Power Density (mW/cm ²)	Limit (mW/cm ²)	Ratio	Result
LTE	1909.8	25.7	371.54	1.39	1.38	0.09377	1	0.09377	Pass

RF Function	Frequency (MHz)	Max Turn up Power (dBm)	Max Turn up Power (mW)	ANT Gain (dBi)	ANT Gain (gain of antenna in linear scale)	Power Density (mW/cm ²)	Limit (mW/cm ²)	Ratio	Result
BLE	2480	-3.5	0.4467	1.03	1.268	0.00011	1	0.00011	Pass

The max MPE of simultaneous transmission:

$$\text{LTE (0.09377)} + \text{BLE (0.00011)} = 0.09388 < 1$$

Note:

1. The Maximum Power Density is less than the limit, complies with the exemption requirements.

※※※※※END OF THE REPORT※※※※※