



# RADIO TEST REPORT

Report No: STS2106071H02

Issued for

Shenzhen Coban Electronics Co.,Ltd

5/F, Block 22, Wisdomland Business Park, Guankou 2nd  
Road, Nantou, Nanshan District ,Shenzhen, Guangdong,  
China.518052

<b>Product Name:</b>	Pet GPS Tracker
<b>Brand Name:</b>	BAANOOL, DI QIU TU XING 
<b>Model Name:</b>	GPS-201
<b>Series Model:</b>	BN-201
<b>FCC ID:</b>	2ATUK-BN-201
<b>Test Standard:</b>	FCC 47CFR §2.1091

Any reproduction of this document must be done in full. No single part of this document may be reproduced without permission from STS, all test data presented in this report is only applicable to presented test sample.

Shenzhen STS Test Services Co., Ltd.  
A 1/F, Building B, Zhuoke Science Park, No.190 Chongqing Road, HepingShequ,  
Fuyong Sub-District, Bao'an District, Shenzhen, Guang Dong, China  
TEL: +86-755 3688 6288 FAX: +86-755 3688 6277 E-mail:sts@stsapp.com





## Test Report Certification

**Applicant's Name** ..... : Shenzhen Coban Electronics Co.,Ltd  
**Address** ..... : 5/F, Block 22, Wisdomland Business Park, Guankou 2nd Road, Nantou, Nanshan District ,Shenzhen, Guangdong, China.518052  
**Manufacturer's Name** ..... : Shenzhen Coban Electronics Co.,Ltd  
**Address** ..... : 602 &702, Bldg. C2, Xinqiao Industrial Park, Tongfuyu Industrial Area, Xinhe Avenue, Gonghe Community, Shajing Sub-District, Bao'an District, Shenzhen, Guangdong, China

### Product Description

**Product Name** ..... : Pet GPS Tracker  
BAANOOOL, DI QIU TU XING

**Brand Name** ..... :



**Model Name** ..... : GPS-201

**Series Model** ..... : BN-201

**Standards** ..... : FCC 47CFR §2.1091

This report shall not be reproduced except in full, without the written approval of STS, this document only be altered or revised by STS, personal only, and shall be noted in the revision of the document.

**Date of Test** ..... :

**Date of receipt of test item** ..... : 09 June. 2021

**Date (s) of performance of tests** ..... : 09 June. 2021 ~ 24 Jan. 2022

**Date of Issue** ..... : 24 Jan. 2022

**Test Result** ..... : **Pass**

Testing Engineer :

(Chris Chen)

Technical Manager :

(Sean she)

Authorized Signatory :

(Vita Li)





## TABLE OF CONTENTS

<b>1. GENERAL INFORMATION</b>	<b>5</b>
1.1 GENERAL DESCRIPTION OF THE EUT	5
1.2 TEST FACTORY	5
<b>2. FCC 47CFR §2.1091 REQUIREMENT</b>	<b>6</b>
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	Report No.	Effect Page	Contents
00	24 Jan. 2022	STS2106071H02	ALL	Initial Issue





## 1. GENERAL INFORMATION

### 1.1 GENERAL DESCRIPTION OF THE EUT

Product Name	Pet GPS Tracker									
Brand Name	BAANOOL, DI QIU TU XING 									
Model Name	GPS-201									
Series Model	BN-201									
Model Difference	Only different in appearance and color.									
Product Description	<p>The EUT is Pet GPS Tracker</p> <table border="1"><tr><td>Operation Frequency:</td><td>Band 5: 824~849MHz</td></tr><tr><td>Modulation Type:</td><td>BPSK, QPSK</td></tr><tr><td>Antenna gain:</td><td>0dBi</td></tr><tr><td>Antenna Designation:</td><td>PIFA Antenna</td></tr></table>		Operation Frequency:	Band 5: 824~849MHz	Modulation Type:	BPSK, QPSK	Antenna gain:	0dBi	Antenna Designation:	PIFA Antenna
Operation Frequency:	Band 5: 824~849MHz									
Modulation Type:	BPSK, QPSK									
Antenna gain:	0dBi									
Antenna Designation:	PIFA Antenna									
Rating	Input: DC 5V 300mA									
Battery	Rated Voltage:3.7V Charge Limit Voltage:4.2V Capacity: 450mAh									
Hardware Version	201-V1.03									
Software Version	201_V1.03_220120									

### 1.2 TEST FACTORY

SHENZHEN STS TEST SERVICES CO., LTD

Add. : A 1/F, Building B, Zhuoke Science Park, No.190 Chongqing Road, HepingShequ, Fuyong Sub-District, Bao'an District, Shenzhen, Guang Dong, China

FCC test Firm Registration Number: 625569

IC test Firm Registration Number: 12108A

A2LA Certificate No.: 4338.01



## 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 <sup>2</sup> )
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

Friis Formula

Friis Transmission Formula:  $P_d = (P_{out} * G) / (4 * \pi * r^2)$

Where

$P_d$  = power density in mW/cm<sup>2</sup>

$P_{out}$  = 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

Mode	Detector	Turn up Power
Band 5	AV	27±1dBm

ANT Gain (G)

824-849MHz: 0dBi (gain of antenna in linear scale=1)

Protocol	Max Turn up Power (dBm)	Max Turn up Power (mW)	ANT Gain(gain of antenna in linear scale)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/c m <sup>2</sup> )	Result
Band 5	28	630.96	1	0.126	0.549	Pass

※※※※ END OF THE REPORT ※※※※