

TEST REPORT

Reference No...... : WTF24D07168052W004
FCC ID : 2BHXX-SEAL
Applicant..... : Vynd B.V.
Address..... : Woudseweg 32, 5275JK Den Dungen, Netherlands
Manufacturer : Shenzhen ilinkcon Technology Co., Ltd.
Address..... : Room 631, Building 1, Anle Industrial Park, Block 40, Anle Community, Xin'an Street, Bao'an District, Shenzhen
Product..... : GPS Tracker
Model(s). : Smart Seal
Standards..... : FCC 47CFR Part 2 Subpart J Section 2.1091
Date of Receipt sample : 2024-07-23
Date of Test : 2024-07-24 to 2024-08-22
Date of Issue..... : 2024-09-19
Test Result..... : **Pass**

Remarks:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

Prepared By:

Waltek Testing Group Co., Ltd.

Address: No. 77, Houjie Section, Guantai Road, Houjie Town, Dongguan City, Guangdong, China

Tel: +86-769-2267 6998

Fax: +86-769-2267 6828

Compiled by:

Ford Wang

Ford Wang / Project Engineer

Approved by:



Deval Qin / Designated Reviewer

2. Contents

	Page
1 COVER PAGE.....	1
2. CONTENTS.....	2
3. REVISION HISTORY.....	3
4. GENERAL INFORMATION.....	4
4.1. GENERAL DESCRIPTION OF E.U.T.....	4
4.2. DETAILS OF E.U.T.	4
4.3. TEST FACILITY	6
4.4. SUBCONTRACTED	6
4.5. ABNORMALITIES FROM STANDARD CONDITIONS	6
5. TEST SUMMARY	7
6. RF EXPOSURE.....	8
6.1. REQUIREMENTS	8
6.2. THE PROCEDURES / LIMIT	8
6.3. MPE CALCULATION METHOD.....	9
6.4. RADIO FREQUENCY RADIATION EXPOSURE EVALUATION.....	9

3. Revision History

Test Report No.	Date of Receipt Sample	Date of Test	Date of Issue	Purpose	Comment	Approved
WTF24D07168052W004	2024-07-23	2024-07-24 to 2024-08-22	2024-09-19	Original	-	Valid

4. General Information

4.1. General Description of E.U.T.

Product:	GPS Tracker
Model(s):	Smart Seal
Model Description:	The product has two appearance colors, white and black, other parts are the same. The EUT is black appearance color in this report.
Test Sample No.:	1-1/1
GSM Band(s):	GPRS 850/1900MHz
GPRS Class:	12
LTE Band(s):	FDD Band 2/4/5/7/12/13/17/25/26/41
Hardware Version:	SL401_V5.0
Software Version:	V01R01C01

4.2. Details of E.U.T.

Operation Frequency:	BLE: 2402~2480MHz GPRS 850: 824~849MHz GPRS 1900: 1850~1910MHz LTE Band 2: 1850~1910MHz LTE Band 4: 1710~1755MHz LTE Band 5: 824~849MHz LTE Band 7: 2500~2570MHz LTE Band 12: 699~716MHz LTE Band 13: 777~787MHz LTE Band 17: 704~716MHz LTE Band 25: 1850~1915MHz LTE Band 26(Part 90): 814~824MHz LTE Band 26(Part 22): 824~849MHz LTE Band 41: 2496~2690MHz
Max. RF output power:	BLE: 0.19dBm GPRS 850: 31.61dBm GPRS 1900: 27.53dBm LTE Band 2: 24.25dBm LTE Band 4: 25.32dBm LTE Band 5: 23.34dBm LTE Band 7: 22.82dBm LTE Band 12: 23.31dBm LTE Band 13: 22.62dBm LTE Band 17: 23.39dBm LTE Band 25: 24.30dBm LTE Band 26(Part 90): 24.39dBm

Modulation Technology:	LTE Band 26(Part 22): 24.21dBm
	LTE Band 41: 24.04dBm
	BLE: GFSK
	GPRS: GMSK
Antenna installation:	LTE: QPSK, 16QAM
	BLE: PCB Antenna
	GSM/LTE: FPC Antenna
Antenna Gain:	BLE: 3.52dBi
	GPRS 850: 0.5dBi
	GPRS 1900: 1.1dBi
	LTE Band 2: 1.1dBi
	LTE Band 4: 1.2dBi
	LTE Band 5: 0.5dBi
	LTE Band 7: 1.5dBi
	LTE Band 12: 0.2dBi
	LTE Band 13: 0.8dBi
	LTE Band 17: 0.3dBi
	LTE Band 25: 1.1dBi
	LTE Band 26(Part 90):0.5dBi
	LTE Band 26(Part 22): 0.5dBi
	LTE Band 41: 1.5dBi

Note:

#: The antenna gain is provided by the applicant, and the applicant should be responsible for its authenticity, WALTEK lab has not verified the authenticity of its information.

Ratings: DC 3.0V 3.0Ah from battery

4.3. Test Facility

The test facility has a test site registered with the following organizations:

ISED CAB identifier: CN0013. Test Firm Registration No.: 7760A.

Waltek Testing Group Co., Ltd. Has been registered and fully described in a report filed with the Industry Canada. The acceptance letter from the Industry Canada is maintained in our files.

Registration number 7760A, October 15, 2016.

FCC Designation No.: CN1201. Test Firm Registration No.: 523476.

Waltek Testing Group Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration number 523476, September 10, 2019.

4.4. Subcontracted

Whether parts of tests for the product have been subcontracted to other labs:

☐ Yes ☒ No

If Yes, list the related test items and lab information:

Test Lab: N/A

Lab address: N/A

Test items: N/A

4.5. Abnormalities from Standard Conditions

None.

5. Test Summary

Test Items	Test Requirement	Result
Maximum Permissible Exposure (Exposure of Humans to RF Fields)	FCC Part 2.1091	PASS

6. RF Exposure

Test Requirement: FCC 47CFR Part 2 Subpart J Section 2.1091

Evaluation Method: FCC 47CFR Part 1 Subpart I Section 1.1310,
KDB 447498 D01 General RF Exposure Guidance v06

6.1. Requirements

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.2 m normally can be maintained between the user and the device.

6.2. The procedures / limit

Table 1 to § 1.1310(e)(1) - Limits for Maximum Permissible Exposure (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(i) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	*(100)	≤6
3.0-30	1842/f	4.89/f	*(900/f ²)	<6
30-300	61.4	0.163	1	<6
300-1,500			f/300	<6
1,500-100,000			5	<6
(ii) 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
300-1,500			f/1500	<30
1,500-100,000			1	<30

f = frequency in MHz. * = Plane-wave equivalent power density.

6.3. MPE Calculation Method

$$S = \frac{P \times G}{4 \times \pi \times R^2}$$

S = power density (in appropriate units, e.g. mW/cm²)

P = output power to the antenna (in appropriate units, e.g., mW).

G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain.

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

From the peak EUT RF output power, the minimum mobile separation distance, R=20cm, as well as the gain of the used antenna, the RF power density can be obtained

6.4. Radio Frequency Radiation Exposure Evaluation

Band	Antenna Gain (dBi)	Antenna Gain (numeric)	Max. Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (mW/cm ²)	Limit (mW/cm ²)
BLE	3.52	2.25	0.19	1.04	0.000467	1.0
GPRS 850	0.5	1.12	31.61	1448.77	0.323351	0.55
GPRS 1900	1.1	1.29	27.53	566.24	0.145102	1.0
LTE Band 2	1.1	1.29	24.25	266.07	0.068183	1.0
LTE Band 4	1.2	1.32	25.32	340.41	0.089263	1.0
LTE Band 5	0.5	1.12	23.34	215.77	0.048159	0.55
LTE Band 7	1.5	1.41	22.82	191.43	0.053787	1.0
LTE Band 12	0.2	1.05	23.31	214.29	0.044635	0.47
LTE Band 13	0.8	1.20	22.62	182.81	0.043719	0.52
LTE Band 17	0.3	1.07	23.39	218.27	0.046524	0.47
LTE Band 25	1.1	1.29	24.3	269.15	0.068972	1.0
LTE Band 26 (Part 90)	0.5	1.12	24.39	274.79	0.061330	0.54
LTE Band 26 (Part 22)	0.5	1.12	24.21	263.63	0.058840	0.55
LTE Band 41	1.5	1.41	24.04	253.51	0.071232	1.0

The worst case is GPRS 1900 and BLE transmitting simultaneously, the result as below:

Evaluation mode	Power density/limit	Sum of the MPE rate	limit
GPRS 1900	0.145102	0.145569	1
BLE	0.000467		

Note:

1. For conservativeness, the lowest frequency of each band is used to determine the MPE limit of that band.
2. Chose the maximum power to do MPE analysis.

Conclusion:

RF Exposure is FCC compliant.

=====End of Report=====