

RF Exposure Evaluation Report

Product : ASTROLINK
Trade mark : ASTROLINK
Model/Type reference : See section 3.2
Serial Number : N/A
Report Number : EED32Q81950403
FCC ID : 2BN2S-TA700B
Date of Issue : Feb. 26, 2025
Test Standards : 47 CFR Part 1.1307
47 CFR Part 1.1310
47 CFR Part 2.1091
47 CFR Part 2.1093
KDB 447498 D04 Interim General RF
Exposure Guidance v01
Test result : PASS

Prepared for:

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Feb. 26, 2025

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1 Version

Version No.	Date	Description
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3 General Information

3.1 Client Information

Applicant:	Chengdu Spaceon Electronics Co.,Ltd.
Address of Applicant:	No.66 Shengye Road, Jinniu District, Chengdu, Sichuan, China
Manufacturer:	Chengdu Spaceon Electronics Co.,Ltd.
Address of Manufacturer:	No.66 Shengye Road, Jinniu District, Chengdu, Sichuan, China
Factory:	Chengdu Spaceon Electronics Co.,Ltd.
Address of Factory:	No.66 Shengye Road, Jinniu District, Chengdu, Sichuan, China

3.2 General Description of EUT

Product Name:	ASTROLINK
Model No.:	TA700B, TA700B-S10, TA700B-S11, TA700B-S12, TA700B-S13, TA700B-G10, TA700B-G11, TA700B-G12, TA700B-G13
Test Model No.:	TA700B
Trade mark:	ASTROLINK

3.3 Product Specification subjective to this standard

Frequency Range:	2402MHz~2480MHz	
Modulation Type:	BLE: GFSK BT: GFSK, $\pi/4$ DQPSK, 8DPSK	
Test Power Grade:	Default	
Test Software of EUT:	MobaXterm_Personal_22.1	
Antenna Type:	Contact antenna	
Antenna Gain:	-4.95dBi	
Power Supply:	Adapter:	DC 5V/2A
	Battery:	DC 3.7V
Sample Received Date:	Jan. 02, 2025	
Sample tested Date:	Jan. 02, 2025 to Jan. 20, 2025	

Remark:

Model No.: TA700B, TA700B-S10, TA700B-S11, TA700B-S12, TA700B-S13, TA700B-G10, TA700B-G11, TA700B-G12, TA700B-G13
Only the model TA700B was tested. The differences between models are: the letters S and G represent different dial appearances and straps, XX(GXX/SXX) represents different colors, and the differences between models do not affect electrical safety and EMC.

3.4 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd

Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China

Telephone: +86 (0) 755 33683668 Fax: +86 (0) 755 33683385

No tests were sub-contracted.

FCC Designation No.: CN1164

3.5 Deviation from Standards

None.

3.6 Abnormalities from Standard Conditions

None.

3.7 Other Information Requested by the Customer

None.

4 SAR Evaluation

4.1 RF Exposure Compliance Requirement

4.1.1 Limits

The SAR-based exemption formula of § 1.1307(b)(3)(i)(B), repeated here as Formula (B.2), applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power or effective radiated power (ERP), whichever is greater, of less than or equal to the threshold Pth (mW).

This method shall only be used at separation distances from 0.5 cm to 40 cm and at frequencies from 0.3 GHz to 6 GHz (inclusive). Pth is given by Formula

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}} (d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases}$$

where

$$x = -\log_{10} \left(\frac{60}{ERP_{20 \text{ cm}} \sqrt{f}} \right)$$

and f is in GHz, d is the separation distance (cm), and ERP20cm is per Formula (B.1).

$$P_{th} \text{ (mW)} = ERP_{20 \text{ cm}} \text{ (mW)} = \begin{cases} 2040f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz} \end{cases} \quad (\text{B.1})$$

The 1 mW Blanket Exemption of § 1.1307(b)(3)(i)(A) applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power of no more than 1 mW, regardless of separation distance.

4.1.2 Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

4.1.3 EUT RF Exposure Evaluation

For Stand alone:

BLE:

Frequency (MHz)	Estimation distance (cm)	Max. Conducted Output power (dBm)	Antenna Gain (dBi)	ERP (dBm)	ERP (mW)	Limit (mW)	MPE ratio	Result
2440	0.5	0.8	-4.95	-1.35	0.7328	2.7528	0.2662	Pass

BT:

Frequency (MHz)	Estimation distance (cm)	Max. Conducted Output power (dBm)	Antenna Gain (dBi)	ERP (dBm)	ERP (mW)	Limit (mW)	MPE ratio	Result
2441	0.5	3.44	-4.95	1.29	1.3459	2.7519	0.4891	Pass

Frequency (MHz)	Estimation distance (cm)	Max. Conducted Output power (dBm)	Antenna Gain (dBi)	ERP (dBm)	ERP (mW)	Limit (mW)	MPE ratio
2441	0.5	3.44	-4.95000	1.29	1.3459	2.7519	0.4891

Note:

- ① EIRP=conducted power+antenna gain;
- ② $ERP = EIRP - 2.15$;
- ③ $EIRP(dBm) = \text{Field strength of the fundamental signal}(dBuV/m@3m) - 95.23$;
- ④ $ERP(mW) = 10^{(ERP(dBm)/10)}$;
- ⑤ The estimation distance is 0.5cm;
- ⑥ The test data please refer to the report of EED32Q81950401, EED32Q81950402 and only the worst case data was recorded in the report.

Statement

1. This report is considered invalid without approved signature, special seal and the seal on the perforation;
2. The Company Name shown on Report and Address, the sample(s) and sample information was/were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified;
3. The result(s) shown in this report refer(s) only to the sample(s) tested;
4. Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule stated in ILAC-G8:09/2019/CNAS-GL015:2022;
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*** End of Report ***