NVLAP LAB CODE 600341-0

MAXIMUM PERMISSIBLE EXPOSURE EVALUATION REPORT

Applicant:	**Sinocastel Co., Ltd.**
Address:	**501,Building 11, Shenzhen Software Park(Phase 2), NO.1, Kejizhong 2 Road, Gaoxin Middle District, Nanshan District, Shenzhen, China**
Product Name:	**Asset GPS Tracker**
FCC ID:	**S8U-T-235LSA**
Standard(s):	**47 CFR §1.1310, 47 CFR §2.1091, 47 CFR §15.247(i)**
Report Number:	**2502T59406E-RF-00B**
Report Date:	**2025/7/24**

The above device has been tested and found compliant with the requirement of the relative standards by Bay Area Compliance Laboratories Corp. (Dongguan).

Alice Tan

Reviewed By: **Alice Tan**
Title: RF Engineer

Pedro Yun

Approved By: **Pedro Yun**
Title: RF Supervisor

Bay Area Compliance Laboratories Corp. (Dongguan)
No.12, Pulong East 1st Road, Tangxia Town, Dongguan, Guangdong, China
Tel: +86-769-86858888
Fax: +86-769-86858891
www.baclcorp.com.cn

CONTENTS

DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
1.0	2502T59406E-RF-00B	Original Report	2025/7/24

1. GENERAL INFORMATION

1.1 General Description Of Equipment under Test

EUT Name:	Asset GPS Tracker
EUT Model:	T-235LSA
Rated Input Voltage:	9-36Vdc
EUT Received Date:	2025/5/16
EUT Received Status:	Good

Output Power And Antenna Gain Information:

Operation Modes	Frequency (MHz)	Antenna Gain▲ (dBi)	Conducted output power including Tune-up Tolerance▲ (dBm)	EIRP/ERP (dBm)	Limit (dBm)
GSM 850	824.2-848.8	-1.94	35.00	30.91	38.45
GSM 1900	1850.2-1909.8	0.64	32.00	32.64	33.0
LTE B2	1850.7-1909.3	0.64	25.70	26.34	33.0
LTE B4	1710.7-1754.3	-0.62	25.70	25.08	30.0
LTE B5	824.7-848.3	-1.94	25.70	21.61	38.45
LTE B66	1710.7-1779.3	-0.62	25.70	25.08	30.0
Note: ERP is for operation below 1 GHz and EIRP for above 1 GHz.					

2.RF EXPOSURE EVALUATION (MPE)

2.1. RF Exposure Evaluation

2.1.1 Applicable Standard

According to subpart 15.247(i), subpart §1.1310, 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 level in excess of the Commission's guidelines.

Limits for Maximum Permissible Exposure (MPE) (§1.1310, §2.1091)

(B) Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	**Electric Field Strength (V/m)**	**Magnetic Field Strength (A/m)**	**Power Density (mW/cm^2)**	**Averaging Time (minutes)**
0.3–1.34	614	1.63	*(100)	30
1.34–30	824/f	2.19/f	*(180/f²)	30
30–300	27.5	0.073	0.2	30
300–1500	/	/	f/1500	30
1500–100,000	/	/	1.0	30

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

According to §1.1310 and §2.1091 RF exposure is calculated.

2.1.2 Calculation formula

Prediction of power density at the distance of the applicable MPE limit
$S = PG/4\pi R^2$ = power density (in appropriate units, e.g. mW/cm^2);
P = power input 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);

For simultaneously transmit system, the calculated power density should comply with:

$$\sum_i \frac{S_i}{S_{Limit,i}} \leq 1$$

2.1.3 Calculated Data:

Operation Modes	**Frequency (MHz)**	**Antenna Gain▲**		**Conducted output power including Tune-up Tolerance▲**		**Evaluation Distance (cm)**	**Power Density (mW/cm^2)**	**MPE Limit (mW/cm^2)**
		(dBi)	**(numeric)**	**(dBm)**	**(mW)**			
BLE	2402-2480	1.83	1.52	-6.0	0.25	20.00	0.0001	1.0
GSM 850	824.2-848.8	-1.94	0.64	35.00	3162.28	20.00	0.403	0.55
GSM 1900	1850.2-1909.8	0.64	1.16	32.00	1584.89	20.00	0.366	1.0
LTE B2	1850.7-1909.3	0.64	1.16	25.70	371.54	20.00	0.086	1.0
LTE B4	1710.7-1754.3	-0.62	0.87	25.70	371.54	20.00	0.064	1.0
LTE B5	824.7-848.3	-1.94	0.64	25.70	371.54	20.00	0.047	0.55
LTE B66	1710.7-1779.3	-0.62	0.87	25.70	371.54	20.00	0.064	1.0
Note: The device contains a certified WWAN module, FCC ID:2AJYU-8BAE002, certified on 12/28/2021								

Note:
The Conducted output power including Tune-up Tolerance provided by manufacturer.

Simultaneous transmission:

BLE can transmit simultaneously with WWAN:

$$\sum_i \frac{S_i}{S_{Limit,i}} \leq 1$$

$S_{BLE}/S_{limit-BLE} + S_{WWAN}/S_{limit-WWAN}$

=0.0001/1.0+0.403/0.55

=0.73

< 1.0

Result: Compliant. The device compliant Simultaneous transmission at 20cm distances.

EXHIBIT A - EUT PHOTOGRAPHS

Please refer to the attachment 2502T59406E-RF-EXP EUT EXTERNAL PHOTOGRAPHS and 2502T59406E-RF-INP EUT INTERNAL PHOTOGRAPHS.

******* END OF REPORT *******