

RF Exposure Evaluation Report

APPLICANT : Locus Solutions,LLC
EQUIPMENT : 2G Tracker
BRAND NAME : Emerson
MODEL NAME : GO Tracker 1.2
FCC ID : AMH101012
STANDARD : 47 CFR Part 2.1091
FCC KDB 447498 D01 v06

We, Sporton International (ShenZhen) Inc., would like to declare that the device has been evaluated in accordance with 47 CFR Part 2.1091 and FCC KDB 447498 D01 v06, and pass the limit. Without written approval of Sporton International (ShenZhen) Inc., the test report shall not be reproduced except in full.



Reviewed by: Long Liang / Supervisor



Approved by: Johnny Chen / Manager



Sporton International (ShenZhen) Inc.

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People's Republic of China



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**Revision History**

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA032504	Rev. 01	Initial issue of report	May 08, 2020



1. Administration Data

1.1. Testing Laboratory

Sporton International (Shenzhen) Inc. is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.01.

Testing Laboratory		
Test Firm	Sporton International (Shenzhen) Inc.	
Test Site Location	1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055 People's Republic of China TEL: +86-755-86379589 FAX: +86-755-86379595	
Test Site No.	FCC Designation No.	FCC Test Firm Registration No.
	CN1256	421272

Applicant	
Company Name	Locus Solutions,LLC
Address	7121 Fairway Dr. Suite #400, Palm Beach Gardens, FL 33418, USA

Manufacturer	
Company Name	Konka Smart Technology Co. , Ltd
Address	#5 Workshop, Intelligent Terminal Industrial Park. West Section of Gangyuan Blvd. Yibin lingang Economic and Technologica Development Zone, Sichuan

2. Description of Equipment Under Test (EUT)

Product Feature & Specification	
EUT Type	2G Tracker
Brand Name	Emerson
Model Name	GO Tracker 1.2
FCC ID	AMH101012
IMEI Code	015147006638201
Wireless Technology and Frequency Range	GSM850: 824.2 MHz ~ 848.8 MHz GSM1900: 1850.2 MHz ~ 1909.8 MHz
Mode	GPRS
HW Version	TK108_61_V10C
SW Version	M6110_V2.1.0
EUT Stage	Identical Prototype
Remark:	
1. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.	
2. The device supports GPRS Class 12.	

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

**3. Maximum RF average output power among production units****<GSM>**

Mode	Burst Average Power (dBm)	
	GSM 850	GSM 1900
GPRS 1 Tx slot	33.50	31.00
GPRS 2 Tx slots	32.50	30.00
GPRS 3 Tx slots	31.00	28.00
GPRS 4 Tx slots	30.50	27.50

4. RF Exposure Limit Introduction

According to ANSI/IEEE C95.1-1992, the criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in §1.1310.

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
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	1.0	6
300-1500			f/300	6
1500-100,000			5	6
(B) 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
300-1500			f/1500	30
1500-100,000			1.0	30

The MPE was calculated at 20 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

$$S = \frac{PG}{4\pi R^2}$$

Where:

S = Power Density

P = Output Power at Antenna Terminals

G = Gain of Transmit Antenna (linear gain)

R = Distance from Transmitting Antenna



5. Radio Frequency Radiation Exposure Evaluation

5.1. Standalone Power Density Calculation

Band	Frequency (MHz)	Antenna Gain (dBi)	Maximum Power (dBm)	Maximum EIRP (dBm)	Average EIRP (mW)	Power Density at 20cm (mW/cm ²)	Limit (mW/cm ²)
GPRS 850 (1 Tx slot)	824.2	-1.00	33.50	32.50	223.872	0.045	0.549
GPRS 850 (2 Tx slots)	824.2	-1.00	32.50	31.50	354.813	0.071	0.549
GPRS 850 (3 Tx slots)	824.2	-1.00	31.00	30.00	374.973	0.075	0.549
GPRS 850 (4 Tx slots)	824.2	-1.00	30.50	29.50	446.684	0.089	0.549
GPRS 1900 (1 Tx slot)	1850.2	-1.00	31.00	30.00	125.893	0.025	1.000
GPRS 1900 (2 Tx slots)	1850.2	-1.00	30.00	29.00	199.526	0.040	1.000
GPRS 1900 (3 Tx slots)	1850.2	-1.00	28.00	27.00	187.932	0.037	1.000
GPRS 1900 (4 Tx slots)	1850.2	-1.00	27.50	26.50	223.872	0.045	1.000

Note: For conservativeness, the lowest frequency of each band is used to determine the MPE limit of that band.

Conclusion:

According to 47 CFR §2.1091, the RF exposure analysis concludes that the RF Exposure is FCC compliant.