

RF Exposure Evaluation Report

APPLICANT : Locus Solutions,LLC
EQUIPMENT : 2G Tracker
BRAND NAME : Emerson
MODEL NAME : GO Tracker 1.3
FCC ID : AMH101007
STANDARD : 47 CFR Part 2.1091

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



Approved by: Mark Qu / Manager



Sporton International (Shenzhen) Inc.

**1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan Shenzhen City
Guangdong Province 518055 China**



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**Revision History**

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA763005	Rev. 01	Initial issue of report	Oct. 31, 2017



1. Administration Data

1.1. Testing Laboratory

Testing Laboratory	
Test Site	Sporton International (Shenzhen) Inc.
Test Site Location	1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan Shenzhen City Guangdong Province 518055 China TEL: +86-755-8637-9589 FAX: +86-755-8637-9595

Applicant	
Company Name	Locus Solutions LLC
Address	14924 Corporate Road South, Jupiter, FL 33478, USA

Manufacturer	
Company Name	Queclink Wireless Solutions Co., Ltd.
Address	Office 501, Building 9, No.99 Tianzhou Road, Xuhui District, Shanghai, China 200233

**2. Description of Equipment Under Test (EUT)**

Product Feature & Specification	
EUT Type	2G Tracker
Brand Name	Emerson
Model Name	GO Tracker 1.3
FCC ID	AMH101007
IMEI Code	867844004100908
Wireless Technology and Frequency Range	GSM850: 824.2 MHz ~ 848.8 MHz GSM1900: 1850.2 MHz ~ 1909.8 MHz
Mode	GPRS
Antenna Type	Fixed Internal Antenna
HW Version	GD200_61_V10
SW Version	GD200R01N32
EUT Stage	Identical Prototype
Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.	

**3. Maximum RF average output power among production units**

Mode	Burst Average Power(dBm)	
	GSM850	GSM1900
GPRS (GMSK, 1 Tx slot)	34.50	30.50
GPRS (GMSK, 2 Tx slots)	33.50	30.00



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)	Maximum EIRP (W)	Average EIRP (mW)	Power Density at 20cm (mW/cm ²)	Limit (mW/cm ²)
GPRS 850 (1 Tx slot)	824.2	-1.71	34.50	32.790	1.901	239.332	0.048	0.549
GPRS 850 (2 Tx slots)	824.2	-1.71	33.50	31.790	1.510	379.315	0.076	0.549
GPRS 1900 (1 Tx slot)	1850.2	1.49	30.50	31.990	1.581	199.067	0.040	1.000
GPRS 1900 (2 Tx slots)	1850.2	1.49	30.00	31.490	1.409	353.997	0.070	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.