RF Exposure Evaluation Report

APPLICANT	:	**Positioning Universal**
EQUIPMENT	:	**asset tracking device**
BRAND NAME	:	**FJ500M**
MODEL NAME	:	**FJ500M**
FCC ID	:	**Contains FCC ID :2AHRH-FJ500M**
STANDARD	:	**47 CFR Part 2.1091** **FCC KDB 447498 D01 v06**

The product was installed a module during the test: M2M DATA MODULE (Model Name: IMA2A, FCC ID: 2AHRH-FJ500M) during test.

We, Sporton International (Kunshan) 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 (Kunshan) Inc., the test report shall not be reproduced except in full.

Rose Wang

Reviewed by: Rose Wang / Supervisor

Kat Yin

Approved by: Kat Yin / Manager

ACCREDITED Cert #5145.02

Sporton International (Kunshan) Inc.
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People's Republic of China

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Revision History

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA941809	Rev. 01	Initial issue of report	May 30, 2019

1. Administration Data

1.1. Testing Laboratory

Sporton International (Kunshan) Inc. is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.02.

Testing Laboratory		
Test Firm	Sporton International (Kunshan) Inc.	
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China TEL : +86-512-57900158 FAX : +86-512-57900958	
Test Site No.	**FCC Designation No.**	**FCC Test Firm Registration No.**
	CN1257	314309

Applicant	
Company Name	Positioning Universal
Address	4660 La Jolla Village Dr Suite #1100, San Diego, CA92122

2. Description of Equipment Under Test (EUT)

Product Feature & Specification	
EUT Type	asset tracking device
Brand Name	FJ500M
Model Name	FJ500M
FCC ID	Contains FCC ID : 2AHRH-FJ500M
S/N	JKP3A191000028
Wireless Technology and Frequency Range	LTE Band 2: 1850 MHz ~ 1910 MHz LTE Band 4: 1710 MHz ~ 1755 MHz LTE Band 12: 699 MHz ~ 716 MHz
Mode	LTE Category M1: QPSK/16QAM
HW Version	v1.0
SW Version	6300
EUT Stage	Production Unit
Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.	

Module Feature & Specification	
Equipment Name	M2M DATA MODULE
Model Name	IMA2A
FCC ID	2AHRH-FJ500M

3. Maximum RF average output power among production units

<LTE >

Mode		Maximum Average power(dBm)
LTE	Band 2	25.00
	Band 4	25.00
	Band 12	25.00

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/f2)	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/f2)	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)
LTE Band 2	1850.7	1.34	25.00	26.340	0.431	430.527	0.086	1.000
LTE Band 4	1710.7	0.47	25.00	25.470	0.352	352.371	0.070	1.000
LTE Band 12	699.7	0.63	25.00	25.630	0.366	365.595	0.073	0.466

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.