

## RF Exposure Report

**Report No.:** SA190415C07

**FCC ID:** O9YJKS3

**Test Model:** JKS3A

**Series Model:** ATS100M-YZ-V, ATS100M-YZ-S, JKS3B, ATS100M-Y-V, ATS100M-Y-S, JKS3C, ATS100M-Z-V, ATS100M-Z-S, JKS3D, ATS100M-V, ATS100M-S

**Received Date:** Apr. 15, 2019

**Date of Evaluation:** Jun. 05, 2019

**Issued Date:** Jun. 11, 2019

**Applicant:** Spireon Inc

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**Issued By:** Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

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**Test Location:** No. 19, Hwa Ya 2nd Rd, Wen Hwa Vil, Kwei Shan Dist., Taoyuan City 33383, Taiwan (R.O.C)

**FCC Registration /  
Designation Number:** 788550 / TW0003



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### Release Control Record

Issue No.	Description	Date Issued
SA190415C07	Original Release	Jun. 11, 2019

## 1 Certificate of Conformity

**Product:** GPS Tracker

**Brand:** Spireon

**Test Model:** JKS3A

**Series Model:** ATS100M-YZ-V, ATS100M-YZ-S, JKS3B, ATS100M-Y-V, ATS100M-Y-S, JKS3C, ATS100M-Z-V, ATS100M-Z-S, JKS3D, ATS100M-V, ATS100M-S

**Sample Status:** Engineering Sample

**Applicant:** Spireon Inc

**Date of Evaluation:** Jun. 05, 2019

**Standards:** FCC Part 2 (Section 2.1091)

KDB 447498 D01 General RF Exposure Guidance v06

IEEE C95.1-1992

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

**Prepared by :** Lena Wang, **Date:** Jun. 11, 2019  
Lena Wang / Specialist

**Approved by :** Dylan Chiou, **Date:** Jun. 11, 2019  
Dylan Chiou / Project Engineer

## 2 RF Exposure

### 2.1 Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm <sup>2</sup> )	Average Time (minutes)
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 <sup>2</sup> )*	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

### 2.2 MPE Calculation Formula

$$Pd = (Pout * G) / (4 * \pi * r^2)$$

where

Pd = power density in mW/cm<sup>2</sup>

Pout = output power to antenna in mW

G = gain of antenna in linear scale

pi = 3.1416

r = distance between observation point and center of the radiator in cm

### 2.3 Classification

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user.

So, this device is classified as **Mobile Device**.

### 2.4 Antenna Gain

LTE Band 4: PIFA Antenna with 2.8 dBi gain

LTE Band 13: PIFA Antenna with 1.8 dBi gain

LTE Band 25: PIFA Antenna with 3.6 dBi gain

LTE Band 26: PIFA Antenna with 1.4 dBi gain

## 2.5 Calculation Result of Maximum Conducted Power

Band	Frequency Band (MHz)	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
LTE 4	1710-1755	24.22	2.8	20	0.100	1.00
LTE 13	777-787	23.53	1.8	20	0.068	0.52
LTE 25	1850-1915	24.11	3.6	20	0.117	1.00
LTE 26	814-849	24.72	1.4	20	0.081	0.54

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