

## **FCC RF EXPOSURE REPORT**

For

## **Geospace Seismic Recorder with Internal Battery**

**MODEL NUMBER: GSB** 

**FCC ID: WAOGSB** 

REPORT NUMBER: 4788200390.1-3

**ISSUE DATE: May 30, 2018** 

Prepared for

**Geospace Technologies Corporation 7007 Pinemont Houston, TX 77040.USA** 

Prepared by

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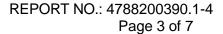
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## **Revision History**

Rev.	Issue Date	Revisions	Revised By
	05/30/2018	Initial Issue	





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#### 1. ATTESTATION OF TEST RESULTS

**Applicant Information** 

Company Name: Geospace Technologies Corporation
Address: 7007 Pinemont Houston, TX 77040.USA

**Manufacturer Information** 

Company Name: Geospace Technologies Corporation
Address: 7007 Pinemont Houston, TX 77040.USA

**EUT Description** 

EUT Name: Geospace Seismic Recorder with Internal Battery

Model: GSB

Brand Name: Geospace Technologies

Sample Status: Normal Sample ID: 1230384

Sample Received Date: October 26, 2017

Date of Tested: November 15, 2017 ~ May 30, 2018

#### APPLICABLE STANDARDS

#### **STANDARD**

**TEST RESULTS** 

FCC 47CFR§2.1091

Complies

Tested By: Checked By:

Denny Huang

**Engineer Project Associate** 

Shawn Wen

Laboratory Leader

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Approved By:

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## 2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091.

## 3. FACILITIES AND ACCREDITATION

	A2LA (Certificate No.: 4102.01)
	UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch.
	has been assessed and proved to be in compliance with A2LA.
	IAS (Lab Code: TL-702)
	UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch.
	has demonstrated compliance with ISO/IEC Standard 17025:2005,
	General requirements for the competence of testing and calibration
	laboratories
	FCC (FCC Designation No.: CN1187)
	UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch.
	Has been recognized to perform compliance testing on equipment subject
Accreditation	to the Commission's Delcaration of Conformity (DoC) and Certification
Certificate	rules
	IC(Company No.: 21320)
	UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch.
	has been registered and fully described in a report filed with
	Industry Canada. The Company Number is 21320.
	VCCI (Registration No.: G-20019, R-20004, C-20012 and T-20011)
	UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch.
	has been assessed and proved to be in compliance with VCCI, the
	Membership No. is 3793.
	Facility Name:
	Chamber D, the VCCI registration No. is G-20019 and R-20004
	Shielding Room B, the VCCI registration No. is C-20012 and T-20011



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## 4. REQUIREMENT

### **LIMIT AND CALCULATION METHOD**

Systems operating under the provisions of FCC 47 CFR 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.

In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as mobile device whereby a distance of 0.2m normally can be maintained between the user and the device, and below RF Permissible Exposure limit shall comply with. Limits for General Population/Uncontrolled Exposure

#### **RF EXPOSURE LIMIT**

Frequency Range (MHz)	E-field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm <sup>2</sup> )	Averaging Time  E  <sup>2</sup> ,  H  <sup>2</sup> or S (Minutes)
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

## **CALCULATION METHOD**

 $S=PG/4\pi R^2$ 

Where:

S=power density

P=power input to antenna

G=power gain of the antenna in the direction of interest relative to an isotropic radiator R=distance to the center of radiation of the antenna



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### **CALCULATED RESULTS**

ZigBee Mode					
Frequency	Output Power	Output Power	Power Density	Limit	Test Result
MHz	dBm	mW	mW/cm <sup>2</sup>	mW/cm <sup>2</sup>	
2405~2480	3	2	0.001	1.0	Complies

Note: 1. Antenna Gain=3.3.0dBi (Numeric 2.14),  $\pi$ =3.141.

- 2. The Power comes from turn up power which declared by customer.
- 3. The minimum separation distance of the device is greater than 20 cm.
- 4. Calculate by WORST-CASE mode.

## **END OF REPORT**