



# RF EXPOSURE REPORT

Report No: STS2111050H02

Issued for

Litum bilgi teknolojileri san. Ve dis tic. A.S

Sevket Ozcelik sok. No29 Alsancak izmir Turkey

<b>Product Name:</b>	Litum Tag Compact
<b>Brand Name:</b>	Litum
<b>Model Name:</b>	632
<b>Series Model:</b>	N/A
<b>FCC ID:</b>	2AW7W-632
<b>Test Standard:</b>	FCC 47CFR §2.1093

Any reproduction of this document must be done in full. No single part of this document may be reproduced without permission from STS, all test data presented in this report is only applicable to presented test sample.

Shenzhen STS Test Services Co., Ltd.  
A 1/F, Building B, Zhuoke Science Park, No.190 Chongqing Road, HepingShequ,  
Fuyong Sub-District, Bao'an District, Shenzhen, Guang Dong, China  
TEL: +86-755 3688 6288 FAX: +86-755 3688 6277 E-mail:sts@stsapp.com





### Test Report Certification

**Applicant's Name**..... : Litum bilgi teknolojileri san. Ve dis tic. A.S  
Address ..... : Sevket Ozcelik sok. No29 Alsancak izmir Turkey  
**Manufacturer's Name** ..... : Litum bilgi teknolojileri san. Ve dis tic. A.S  
Address ..... : Sevket Ozcelik sok. No29 Alsancak izmir Turkey

#### Product Description

Product Name..... : Litum Tag Compact  
Brand Name ..... : Litum  
Model Name ..... : 632  
Series Model..... : N/A

**Standards**..... : FCC 47CFR §2.1093

This report shall not be reproduced except in full, without the written approval of STS, this document only be altered or revised by STS, personal only, and shall be noted in the revision of the document.

#### Date of Test..... :

Date of receipt of test item ..... : 10 Nov. 2021  
Date (s) of performance of tests..... : 10 Nov. 2021 ~ 16 Dec. 2021  
Date of Issue..... : 16 Dec. 2021  
Test Result..... : **Pass**

Testing Engineer :

(Chris Chen)

Technical Manager :

(Sean she)

Authorized Signatory :

(Vita Li)





## TABLE OF CONTENTS

<b>1. GENERAL INFORMATION</b>	<b>5</b>
1.1 GENERAL DESCRIPTION OF THE EUT	5
1.2 TEST FACTORY	5
<b>2. FCC 47CFR §2.1093 REQUIREMENT</b>	<b>6</b>
2.1 DETERMINATION OF EXEMPTION	6
2.2 TEST RESULT	8





**Revision History**

Rev.	Issue Date	Report No.	Effect Page	Contents
00	16 Dec. 2021	STS2111050H02	ALL	Initial Issue





## 1. GENERAL INFORMATION

### 1.1 GENERAL DESCRIPTION OF THE EUT

Product Name	Litum Tag Compact	
Brand Name	Litum	
Model Name	632	
Series Model	N/A	
Model Difference	N/A	
Product Description	The EUT is Litum Tag Compact	
	Operation Frequency:	6489.6MHz
	Modulation Type:	QPSK
	Antenna gain:	2.4dBi
	Antenna Designation:	Chip antenna
Battery	Rated Voltage:3.7 Charge Limit Voltage: 4.2V Capacity: 330mAh	
Hardware Version	LT010103	
Software Version	12.01.02.07	

### 1.2 TEST FACTORY

SHENZHEN STS TEST SERVICES CO., LTD

Add. : A 1/F, Building B, Zhuoke Science Park, No.190 Chongqing Road, HepingShequ, Fuyong Sub-District, Bao'an District, Shenzhen, Guang Dong, China

FCC test Firm Registration Number: 625569

IC test Firm Registration Number: 12108A

A2LA Certificate No.: 4338.01



## 2. FCC 47CFR §2.1093 REQUIREMENT

### 2.1 DETERMINATION OF EXEMPTION

For single RF sources (i.e., any single fixed RF source, mobile device, or portable device, as defined in paragraph (b)(2) of this section): A single RF source is exempt if:

(A) The available maximum time-averaged power is no more than 1 mW, regardless of separation distance. This exemption may not be used in conjunction with other exemption criteria other than those in paragraph (b)(3)(ii)(A) of Part 1.1307. Medical implant devices may only use this exemption and that in paragraph (b)(3)(ii)(A);

(B) Or the available maximum time-averaged power or effective radiated power (ERP), whichever is greater, is less than or equal to the threshold  $P_{th}$  (mW) described in the following formula. This method shall only be used at separation distances (cm) from 0.5 centimeters to 40 centimeters and at frequencies from 0.3 GHz to 6 GHz (inclusive).  $P_{th}$  is given by:

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}} (d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases}$$

Where

$$x = -\log_{10} \left( \frac{60}{ERP_{20 \text{ cm}} \sqrt{f}} \right) \text{ and } f \text{ is in GHz;}$$

and

$$ERP_{20 \text{ cm}} \text{ (mW)} = \begin{cases} 2040f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz} \end{cases}$$

$d$  = the separation distance (cm);



(C) Or using Table 1 and the minimum separation distance (R in meters) from the body of a nearby person for the frequency (f in MHz) at which the source operates, the ERP (watts) is no more than the calculated value prescribed for that frequency. For the exemption in Table 1 to apply, R must be at least  $\lambda/2\pi$ , where  $\lambda$  is the free-space operating wavelength in meters. If the ERP of a single RF source is not easily obtained, then the available maximum time-averaged power may be used in lieu of ERP if the physical dimensions of the radiating structure(s) do not exceed the electrical length of  $\lambda/4$  or if the antenna gain is less than that of a half-wave dipole (1.64 linear value).

RF Source frequency (MHz)	Threshold ERP(watts)
0.3-1.34	$1,920 R^2$ .
1.34-30	$3,450 R^2/f^2$ .
30-300	$3.83 R^2$ .
300-1,500	$0.0128 R^2f$ .
1,500-100,000	$19.2R^2$ .



## 2.2 TEST RESULT

**UWB the Worst Case**

Detector	Radiation (Peak)	Radiation (Peak)
6489.6MHz	60.12dBuV/m	-35.08dBm (+/- 1dBm)

Remark: dBm= dBuV/m-95.2

ANT Gain (G)

Antenna Gain: 2.4dBi (gain of antenna in linear scale=1.74)

Mode	Frequency (GHz)	Maximum ERP (dBm)	Maximum ERP (mW)	Limit (mW)
QPSK	6.4896	-34.08	0.00039	1

The Maximum ERP is less than 1mW, complies with the exemption requirements of FCC 47CFR § 2.1093(C)(1) and FCC 47CFR § 1.1307(3)(i)(A)

\*\*\*\*\*END OF THE REPORT\*\*\*\*\*