

# TEST REPORT

**Reference No.**..... : WTS18S10126731-5W  
**FCC ID** ..... : XUJS3001  
**Applicant**..... : Launch Tech Co., Ltd.  
**Address**..... : Launch Industrial Park, North of Wuhe Rd. Banxuegang, Longgang,  
Shenzhen, China  
**Manufacturer** ..... : The same as above  
**Address**..... : The same as above  
**Product**..... : Heavy duty / Medium duty / Light duty Vehicle Communication  
Interface  
**Model(s)** ..... : S3001  
**Brand Name**..... : LAUNCH  
**Standards**..... : FCC Part 2.1091  
**Date of Receipt sample** .... : 2018-10-19  
**Date of Test** ..... : 2018-10-20 to 2019-04-24  
**Date of Issue**..... : 2019-04-25  
**Test Result**..... : **Pass**

Remarks:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

**Prepared By:**

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## 2 Laboratories Introduction

**Waltek Services (Shenzhen) Co., Ltd** is a professional third-party testing and certification laboratory with multi-year product testing and certification experience, established strictly in accordance with ISO/IEC 17025 requirements, and accredited by ILAC (International Laboratory Accreditation Cooperation) member. A2LA (American Association for Laboratory Accreditation, the certification number is 4243.01) of USA, CNAS (China National Accreditation Service for Conformity Assessment, the registration number is L3110) of China. Meanwhile, Waltek has got recognition as registration and accreditation laboratory from EMSD (Electrical and Mechanical Services Department), and American Energy star, FCC (The Federal Communications Commission), CEC (California energy efficiency), ISED (Innovation, Science and Economic Development Canada). It's the strategic partner and data recognition laboratory of international authoritative organizations, such as Intertek (ETL-SEMKO), TÜV Rheinland, TÜV SÜD, etc.



Waltek Services (Shenzhen) Co., Ltd is one of the largest and the most comprehensive third party testing laboratory in China. Our test capability covered four large fields: safety test. Electro Magnetic Compatibility (EMC), and energy performance, wireless radio. As a professional, comprehensive, justice international test organization, we still keep the scientific and rigorous work attitude to help each client satisfy the international standards and assist their product enter into globe market smoothly.

**Test Facility:****A. Accreditations for Conformity Assessment (International)**

Country/Region	Scope Covered By	Scope	Note
USA	ISO/IEC 17025	FCC ID \ DOC \ VOC	1
Canada		IC ID \ VOC	2
Japan		MIC-T \ MIC-R	-
Europe		EMCD \ RED	-
Taiwan		NCC	-
Hong Kong		OFCA	-
Australia		RCM	-
India		WPC	-
Thailand		NTC	-
Singapore		IDA	-
Note: 1. FCC Designation No.: CN1201. Test Firm Registration No.: 523476. 2. ISED CAB identifier: CN0013			

**B. TCBs and Notify Bodies Recognized Testing Laboratory.**

Recognized Testing Laboratory of ...	Notify body number
TUV Rheinland	Optional.
Intertek	
TUV SUD	
SGS	
Phoenix Testlab GmbH	0700
Element Materials Technology Warwick Ltd	0891
Timco Engineering, Inc.	1177
Eurofins Product Service GmbH	0681

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### 3 Revision History

Test report No.	Date of Receipt sample	Date of Test	Date of Issue	Purpose	Comment	Approved
WTS18S10126 731-5W	2018-10-19	2018-10-20 to 2019-04- 24	2019-04-25	original	-	Valid

## 4 General Information

### 4.1 General Description of E.U.T.

Product:	Heavy duty / Medium duty / Light duty Vehicle Communication Interface
Model(s):	S3001
Model Description:	N/A
Wi-Fi Specification:	2.4G-802.11b/g/n HT20/n HT40 5G-802.11a/n/ac HT20 /n/ac HT40 /ac HT80
Bluetooth Version:	Bluetooth v4.0 with BLE
Hardware Version:	V1.00
Software Version:	S153MWB_TL_AO1_V0.4_201512211540

### 4.2 Details of E.U.T.

Ratings:	Battery DC 12/24V
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## 5 Test Summary

Test Items	Test Requirement	Result
Maximum Permissible Exposure (Exposure of Humans to RF Fields)	2.1091	PASS

## 6 RF Exposure

Test Requirement: FCC Part 2.1091

Test Mode: The EUT work in test mode(Tx).

### 6.1 Procedures and Requirements

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.2m normally can be maintained between the user and the device.

FCC Part 1.1307:

(A) Limits for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric 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)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842 / f	4.89 / f	(900 / f)*	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

Frequency Range (MHz)	Electric 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)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100,000			1.0	30

Note: f = frequency in MHz ;

\*Plane-wave equivalent power density

Predication of MPE limit at a given distance

$$S = \frac{PG}{4\pi R^2}$$

S = power density (in appropriate units, e.g. mW/cm<sup>2</sup>)

P = power input to the antenna (in appropriate units, e.g., mW).

G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain.



R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

From the peak EUT RF output power, the minimum mobile separation distance,  $d=20\text{cm}$ , as well as the gain of the used antenna, the RF power density can be obtained

## 6.2 Test Result

FCC Part 2.1091:

A distance of 5mm normally can be maintained between the user and the device.

Mode	Antenna Gain (dBi)	Antenna Gain (numeric)	Max.Peak Output Power (dBm)	Peak Output Power (mW)	Power Density ( $\text{mW}/\text{cm}^2$ )	Limit of Power Density ( $\text{mW}/\text{cm}^2$ )
BT	3.69	2.339	7.16	5.20	0.002419	1
BLE	3.69	2.339	5.39	3.46	0.001610	1
2.4G WIFI	3.69	2.339	18.38	68.87	0.032042	1
5G WIFI	4.19	2.624	18.64	73.11	0.038170	1

====End of Report====