TEST REPORT

Reference No.	:	WTS20S06036033W004 V1
FCC ID	:	XUJS4001
Applicant	:	Launch Tech Co., Ltd.
Address	:	Launch Industrial Park, North of Wuhe Rd. Banxuegang, Longgang, Shenzhen, China
Manufacturer	:	Launch Tech Co., Ltd.
Address	:	Launch Industrial Park, North of Wuhe Rd. Banxuegang, Longgang, Shenzhen, China
Product	:	Heavy duty / Medium duty / Light duty Vehicle Communication Interface
Model(s)	:	S4001
Standards	:	FCC Part 1.1307
Date of Receipt sample	:	2020-06-11
Date of Test	:	2020-06-12 to 2021-03-15
Date of Issue	:	2021-03-16
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.

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2. Contents

3. Revision History

Test report No.	Date of Receipt sample	Date of Test	Date of Issue	Purpose	Comment	Approved
WTS20S06036033 W004	2020-06-11	2020-06-12 to 2021-03-08	2021-03-09	original	-	Replaced
WTS20S06036033 W004 V1	2020-06-11	2020-06-12 to 2021-03-15	2021-03-16	Version 1	Updated	Valid

4. General Information

4.1. General Description of E.U.T.

Product:	Heavy duty / Medium duty / Light duty Vehicle Communication Interface
Model(s):	S4001
Model difference:	N/A
Operation Frequency:	BT:2402-2480MHz, 79 Channels in total 5G: 802.11a ,5805MHz
Bluetooth Version:	Bluetooth v4.2 with BLE
Antenna installation:	internal permanent antenna
Max. RF output power:	Bluetooth: 7.46dBm BLE: 2.04dBm 5G: 8.28dBm
Antenna Gain:	2dBi
Type of Modulation:	BT:GFSK, 8DPSK 5G: OFDM
Hardware Version:	V1.00.000
Software Version:	V1.0

4.2. Details of E.U.T.

Ratings: Input: 9-36V⎓, 0.5A max

5. Test Summary

Test Items	Test Requirement	Result
Maximum Permissible Exposure (Exposure of Humans to RF Fields)	1.1307	PASS

6. RF Exposure

Test Requirement: FCC Part 1.1307

Evaluation Method: FCC Part 2.1091 & KDB 447498 D01 General RF Exposure Guidance v06

6.1. 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 0.2 m normally can be maintained between the user and the device.

6.2. The procedures / limit

(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^2)	Averaging Time $\|E\|^2$,$\|H\|^2$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^2)	Averaging Time $\|E\|^2$,$\|H\|^2$ 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

6.3. MPE Calculation Method

$$S = \frac{P \times G}{4 \times \pi \times R^2}$$

S = power density (in appropriate units, e.g. mW/cm^2)
P = output power 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, R=20cm, as well as the gain of the used antenna, the RF power density can be obtained

Frequency	Antenna Gain (dBi)	Antenna Gain (numeric)	Max. conducted Output Power (dBm)	Max. conducted Output Power (mW)	Power Density (mW/cm2)	Limit of Power Density (mW/cm2)
BT	2.00	1.585	7.46	5.57	0.001757	1
BLE	2.00	1.585	2.04	1.60	0.000504	1
5G	2.00	1.585	8.28	6.73	0.002122	1

6.4. Result: Compliance

No SAR measurement is required.

======End of Report======