



中认信通
CHINA CERTIFICATION ICT CO., LTD (DONGGUAN)



RF EXPOSURE EVALUATION

Applicant: FJ Dynamics Co.,Ltd.

Address: 21F, Das Tower, No. 28, 1st South Keji Road, Nanshan District ,
Shenzhen, China

FCC ID: 2A2LL-V10A

Product Name: GNSS Receiver

Standard(s): 47 CFR §1.1307, 47 CFR §2.1091

447498 D01 General RF Exposure Guidance v06

The above device has been tested and found compliant with the requirement of the relative standards
by China Certification ICT Co., Ltd (Dongguan)

Report Number: 2503S31640E-RF-00H

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Test Facility

The Test site used by China Certification ICT Co., Ltd (Dongguan) to collect test data is located on the No. 113, Pingkang Road, Dalang Town, Dongguan, Guangdong, China.

The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No. : 442868, the FCC Designation No. : CN1314.

Declarations

China Certification ICT Co., Ltd (Dongguan) is not responsible for the authenticity of any test data provided by the applicant. Data included from the applicant that may affect test results are marked with a triangle symbol “▲”. Customer model name, addresses, names, trademarks etc. are not considered data.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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Each test item follows the test standard(s) without deviation.

DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
1.0	2503S31640E-RF-00H	Original Report	2025/9/8

1. GENERAL INFORMATION

1.1 Product Description for Equipment under Test (EUT)

EUT Name:	GNSS Receiver
Trade Name:	FJD Trion
EUT Model:	V10a
Rated Input Voltage:	DC 9~32V, Typical: DC 12V from AC/DC Adapter; or DC 7.3V from Built-in Battery
EUT Received Date:	2025/4/7
EUT Received Status:	Good

2. RF EXPOSURE EVALUATION

2.1 RF Exposure Evaluation

2.1.1 Applicable Standard

According to subpart 15.247(i)& 15.407(f) and subpart §1.1310, 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 level in excess of the Commission's guidelines.

Limits for Maximum Permissible Exposure (MPE) (§1.1310, §2.1091)

(B) Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Averaging Time (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

f = frequency in MHz; * = Plane-wave equivalent power density;

According to §1.1310 and §2.1091 RF exposure is calculated.

2.1.2 Calculation formula:

Prediction of power density at the distance of the applicable MPE limit

$S = PG/4\pi R^2$ = power density (in appropriate units, e.g. mW/cm²);

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);

For simultaneously transmit system, the calculated power density should comply with:

$$\sum_i \frac{S_i}{S_{Limit,i}} \leq 1$$

2.1.3 Calculated Data:

Operation Modes	Frequency (MHz)	Antenna Gain		Conducted output power including Tune-up Tolerance [▲]		Evaluation Distance (cm)	Power Density (mW/cm ²)	MPE Limit (mW/cm ²)
		(dBi)	(numeric)	(dBm)	(mW)			
Bluetooth	2402-2480	-0.62	0.87	9.0	7.94	20	0.0014	1.0
SRD	902.6-927.8	3.61	2.30	-2.0	0.63	20	0.0003	0.6
Wi-Fi	2412-2462	-0.62	0.87	17.0	50.12	20	0.0086	1.0
	5150-5250	-1.85	0.65	18.0	63.10	20	0.0082	1.0
	5250-5350	-1.80	0.66	18.0	63.10	20	0.0083	1.0
	5470-5725	-0.33	0.93	18.0	63.10	20	0.0116	1.0
	5725-5850	0.37	1.09	18.0	63.10	20	0.0137	1.0
GSM850	824-849	3.81	2.40	35.0	3162.28	20	0.1824	0.5
PCS1900	1850-1910	-0.11	0.97	31.0	1258.93	20	0.0294	1.0
WCDMA B2	1850-1910	-0.11	0.97	25.0	316.23	20	0.0614	1.0
WCDMA B4	1710-1755	1.65	1.46	25.0	316.23	20	0.0920	1.0
WCDMA B5	824-849	3.81	2.40	25.0	316.23	20	0.1513	0.5
LTE B2	1850-1910	-0.11	0.97	25.0	316.23	20	0.0614	1.0
LTE B4	1710-1755	1.65	1.46	25.0	316.23	20	0.0920	1.0
LTE B5	824-849	3.81	2.40	25.0	316.23	20	0.1513	0.5
LTE B7	2500-2570	3.01	2.00	25.0	316.23	20	0.1259	1.0
LTE B12	699-716	-1.41	0.72	25.0	316.23	20	0.0455	0.5
LTE B13	777-787	2.70	1.86	25.0	316.23	20	0.1172	0.5
LTE B14	788-798	2.70	1.86	25.0	316.23	20	0.1172	0.5
LTE B17	704-716	-1.41	0.72	25.0	316.23	20	0.0455	0.5
LTE B25	1850-1915	-0.11	0.97	25.0	316.23	20	0.0614	1.0
LTE B26	814-849	3.81	2.40	25.0	316.23	20	0.1513	0.5
LTE B38	2570-2620	3.45	2.21	25.0	316.23	20	0.1393	1.0
LTE B41	2496-2690	3.45	2.21	25.0	316.23	20	0.1393	1.0
LTE B66	1710-1780	1.65	1.46	25.0	316.23	20	0.0920	1.0
LTE B71	663-698	-4.12	0.39	25.0	316.23	20	0.0244	0.4

Note:

The Maximum Conducted Power including Tune-up Tolerance was declared by manufacturer.

Frame-average power=Burst power+ Division Factors(-9.19)

For Simultaneous transmission:

Bluetooth, Wifi and WWAN can't transmit simultaneously, but Bluetooth, Wifi or WWAN can transmit simultaneously with SRD:

$$\sum_i \frac{S_i}{S_{Limit,i}} \leq 1$$

$$= S_{SRD} / S_{limit-SRD} + S_{WWAN} / S_{limit-WWAN}$$

$$= 0.0003/0.6 + 0.1824/0.5$$

$$= 0.36 < 1$$

Result: Compliant. The device compliant Simultaneous transmission at 20cm distances.

3. EUT PHOTOGRAPHS

Please refer to the attachment 2503S31640E-RF-EXP EUT EXTERNAL PHOTOGRAPHS and 2503S31640E-RF-INP EUT INTERNAL PHOTOGRAPHS

===== END OF REPORT =====