

TEST REPORT

Applicant: Truesense S.R.L.
Address: Viale Lombardia, 217 - 20900, Monza, Italy
Equipment Type: TS Mini 250 UWB module
Model Name: TS Mini 250
Brand Name: Truesense
FCC ID: 2BFZA-TSMINI250
KDB 447498 D04 v01
Test Standard: 47 CFR Part 2.1093
Sample Arrival Date: Oct. 11, 2025
Test Date: Oct. 28, 2025
Date of Issue: Nov. 17, 2025

ISSUED BY:

Shenzhen BALUN Technology Co., Ltd.

**Tested by:** Xiong Lining**Checked by:** Xu Rui**Approved by:** Tolan Tu

(Testing Director)

Revision History

<u>Version</u>	<u>Issue Date</u>	<u>Revisions Content</u>
<u>Rev. 01</u>	<u>Nov. 17, 2025</u>	<u>Initial Issue</u>

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1 GENERAL INFORMATION

1.1 Test Laboratory

Name	Shenzhen BALUN Technology Co., Ltd.
Address	Block B, 1/F, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Phone Number	+86 755 6685 0100

1.2 Test Location

Name	Shenzhen BALUN Technology Co., Ltd.
Location	☐ Block B, 1/F, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
	☒ 1/F, Building B, Ganghongji High-tech Intelligent Industrial Park, No. 1008, Songbai Road, Yangguang Community, Xili Sub-district, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Accreditation Certificate	The laboratory is a testing organization accredited by FCC as a accredited testing laboratory. The designation number is CN1196.

2 PRODUCT INFORMATION

2.1 Applicant Information

Applicant	Truesense S.R.L.
Address	Viale Lombardia, 217 - 20900, Monza, Italy

2.2 Manufacturer Information

Manufacturer	Truesense S.R.L.
Address	Viale Lombardia, 217 - 20900, Monza, Italy

2.3 General Description for Equipment under Test (EUT)

EUT Name	TS Mini 250 UWB module
Model Name Under Test	TS Mini 250
Series Model Name	N/A
Description of Model name differentiation	N/A
Hardware Version	V0200
Software Version	5.6.0
Dimensions (Approx.)	27mmx27mmx3.4mm
Weight (Approx.)	3g

2.4 Technical Information

Network and Wireless connectivity	UWB
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The requirement for the following technical information of the EUT was tested in this report:

Operating Mode	UWB	
Frequency Range	UWB	6.24 GHz-8.24 GHz
Antenna Type	UWB	PCB Patch Antenna and External Antenna
Exposure Category	General Population/Uncontrolled Exposure	
Product Type	Portable Device, Mobile Device, Fixed Device	

3 SUMMARY OF TEST RESULT

3.1 Test Standards

No.	Identity	Document Title
1	47 CFR Part 2.1093	Radiofrequency radiation exposure evaluation: portable devices
2	KDB 447498 D04 v01	KDB 447498 D04 Interim General RF Exposure Guidance v01

4 DEVICE CATEGORY AND LEVELS LIMITS

Portable Devices:

CFR Title 47 §2.1093(b)

(b) For purposes of this section, a portable device is defined as a transmitting device designed to be used so that the radiating structure(s) of the device is/are within 20 centimeters of the body of the user.

FCC KDB 447498 Devices:

In section 2.1.2 of FCC KDB 447498 D04, per § 1.1307(b)(3)(i)(A), a single RF source is exempt RF device (from the requirement to show data demonstrating compliance to RF exposure limits, as previously mentioned) if the available maximum time-averaged power is no more than 1 mW, regardless of separation distance. This exemption applies to all operating configurations and exposure conditions, for the frequency range 100 kHz to 100 GHz, regardless of fixed, mobile, or portable device exposure conditions. This is a standalone exemption, and it cannot be applied in conjunction with any other test exemption.

5 ASSESSMENT RESULT

5.1 Output Power

Mode	UWB-CH5	UWB-CH9
Peak Power (dBm)	-3.01	-2.40
Antenna Gain (dBm)	3.63	2.41
EIRP (dBm)	0.62	0.01

Note: This table listed the worst case power value, please refer to BL-SZ25A0196-601 report for more details.

5.2 Tune-up power

Mode	Conducted Power Range (dBm)	EIRP Range (dBm)	ERP Range (dBm)
UWB-CH5	[-5.00, -3.00]	[-1.37, 0.63]	[-3.52, -1.52]
UWB-CH9	[-4.00, -2.00]	[-1.59, 0.41]	[-3.74, -1.74]

Note1: ERP= EIRP -2.15dB
 Note2: According KDB 447498 D04, used the greater of maximum conducted power or ERP to compare with the threshold value Pth.

5.3 RF Exposure Evaluation Result

Mode	Tune-up limit power (dBm)	Tune-up limit power (mW)	Threshold Value (mW)	Verdict
UWB-CH5	-1.52	0.70	1.00	Compliance
UWB-CH9	-1.74	0.67	1.00	Compliance

5.4 Conclusion

This EUT is deemed to comply with the reference level limits, therefore the basic restrictions are compliant with human exposure limits.

Statement

1. The laboratory guarantees the scientificity, accuracy and impartiality of the test, and is responsible for all the information in the report, except the information provided by the customer. The customer is responsible for the impact of the information provided on the validity of the results.
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7. Any objection shall be raised to the laboratory within 30 days after receiving the report.

--END OF REPORT--