

Suzhou ShiRuizhuo Technology Co., Ltd.

MPE ASSESSMENT REPORT

Report Type:
FCC MPE assessment report

Model:
MBS00RR

REPORT NUMBER:
2508B0940SHA-002

ISSUE DATE:
Oct 16, 2025

DOCUMENT CONTROL NUMBER:
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Manufacturer: Suzhou ShiRuizhuo Technology Co., Ltd.
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Industrial Park District, Suzhou City, Jiangsu Province, P.R. China

FCC ID: 2BQXJ-MBS00RR01

SUMMARY:

The equipment complies with the requirements according to the following standard(s) or Specification:

KDB447498 D01 General RF Exposure Guidance v06

FCC Part2.1091, FCC Part1.1307(b)

PREPARED BY:

Project Engineer

Teddy Yin

REVIEWED BY:

Reviewer

Wakeyou Wang

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Revision History

Report No.	Version	Description	Issued Date
2508B0940SHA-002	Rev. 01	Initial issue of report	Oct 16, 2025

1 GENERAL INFORMATION

1.1 Description of Equipment Under Test (EUT)

Product name:	RTK Reference Station
Type/Model/PMN/HVIN:	MBS00RR
Description of EUT:	The EUT is RTK Reference Station. The EUT contains LORA function. The worst data is listed in the report.
Rating:	Rated Input: 5.2VDC/1A
EUT type:	☐ Table top ☒ Floor standing
Hardware Version:	M4
Software Version:	B039.01.02
Sample No.:	A250815-35-001
Sample received date:	Jul 16, 2025
Date of test:	Jul 16~Sep 2, 2025

1.2 Technical Specification

Frequency Range:	902MHz ~ 928MHz
Support Standards:	LORA
Modulation Technique:	Frequency Hopping Spread Spectrum(FHSS)
Type of Modulation:	CSS
Channel Number:	50
Channel Separation:	510kHz
Antenna Information:	1.17dBi, PCB antenna(Declared by manufacturer)

TEST REPORT

1.3 Description of Test Facility

Name:	Intertek Testing Services (Shanghai FTZ) Co., Ltd.
Address:	Building 86, No. 1198 Qinzhou Road(North), Shanghai 200233, P.R. China
Telephone:	86 21 61278200
Telefax:	86 21 54262353

The test facility is recognized, certified, or accredited by these organizations:	CNAS Accreditation Lab Registration No. CNAS L21189
	FCC Accredited Lab Designation Number: CN0175
	IC Registration Lab CAB identifier.: CN0014
	VCCI Registration Lab Registration No.: R-14243, G-10845, C-14723, T-12252
	A2LA Accreditation Lab Certificate Number: 3309.02

2 MPE Assessment

Test result: Pass

2.1 MPE Assessment Limit

Mobile device exposure for standalone operations:

Frequency range	E-field strength (V/m)	H-field strength (A/m)	B-field (uT)	Equivalent plane wave power density S_{eq} (W/m ²)
0-1 Hz	-	$3,2 \times 10^4$	4×10^4	-
1-8 Hz	10 000	$3,2 \times 10^4/f^2$	$4 \times 10^4/f^2$	-
8-25 Hz	10 000	4 000/f	5 000/f	-
0,025-0,8 kHz	250/f	4/f	5/f	-
0,8-3 kHz	250/f	5	6,25	-
3-150 kHz	87	5	6,25	-
0,15-1 MHz	87	0,73/f	0,92/f	-
1-10 MHz	$87/f^{1/2}$	0,73/f	0,92/f	-
10-400 MHz	28	0,073	0,092	2
400-2 000 MHz	$1,375 f^{1/2}$	$0,0037 f^{1/2}$	$0,0046 f^{1/2}$	f/200
2-300 GHz	61	0,16	0,20	10

Mobile device exposure for simultaneous transmission operations: **the sum of the MPE ratios for all simultaneously transmitting antennas incorporated in a host device is ≤ 1.0**

2.2 Assessment Results

Power density (S) is calculated according to the formula:

$$S = PG / (4\pi R^2)$$

Where S = power density in mW/cm²

P = Radiated transmit power in mW

G = numeric gain of transmit antenna

R = distance (cm)

As we can see from the test report 2508B0940SHA-001:

The maximum LORA EIRP = 20.07dBm = 101.62mW;

Here R is chosen to be 20cm,

$$S = PG / (4\pi R^2) = 101.62 / (4 * 3.14 * 20 * 20) = 0.0202 \text{mW/cm}^2 < 0.451 \text{ mW/cm}^2$$

Appendix I

Definition below must be outlined in the User Manual:

To satisfy FCC RF exposure requirements, a separation distance of 20 cm or more should be maintained between the antenna of this device and persons during device operation.

To ensure compliance, operations at closer than this distance is not recommended.

***** END *****