

# TEST REPORT

**Applicant:** BeiJing Stronglink Technology Co., Ltd.  
**Address:** A402, Building 8, No. 97, Changping Road, Shahe Town, Changping District, Beijing (Changping Demonstration Park)  
**Equipment Type:** IIC MIFARE Module  
**Model Name:** SL030\_V3.1  
**Brand Name:** Stronglink  
**Test Standard:** EN IEC 62311: 2020  
**Test Date:** Apr. 27, 2022 - Apr. 28, 2022  
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## ISSUED BY:

Shenzhen BALUN Technology Co., Ltd.

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### Revision History

Version	Issue Date	Revisions Content
<u>Rev. 01</u>	<u>May 12, 2022</u>	<u>Initial Issue</u>

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# 1 GENERAL INFORMATION

## 1.1 Identification of the Testing Laboratory

Company Name	Shenzhen BALUN Technology Co., Ltd.
Address	Block B, 1/F, Baisha Science and Technology Park, Shahe West Road, Nanshan District, ShenZhen, GuangDong Province, China
Phone Number	+86 755 6685 0100

## 1.2 Identification of the Responsible Testing Location

Test Location	Shenzhen BALUN Technology Co., Ltd.
Address	Block B, 1/F, Baisha Science and Technology Park, Shahe West Road, Nanshan District, ShenZhen, GuangDong Province, China
Description	All measurement facilities used to collect the measurement data are located at Block B, 1/F, Baisha Science and Technology Park, Shahe West Road, Nanshan District, ShenZhen, GuangDong Province, China

## 2 PRODUCT INFORMATION

### 2.1 Applicant Information

Applicant	BeiJing Stronglink Technology Co., Ltd.
Address	A402, Building 8, No. 97, Changping Road, Shahe Town, Changping District, Beijing (Changping Demonstration Park)

### 2.2 Manufacturer Information

Manufacturer	BeiJing Stronglink Technology Co., Ltd.
Address	A402, Building 8, No. 97, Changping Road, Shahe Town, Changping District, Beijing (Changping Demonstration Park)

### 2.3 Factory Information

Factory	BeiJing Stronglink Technology Co., Ltd.
Address	A402, Building 8, No. 97, Changping Road, Shahe Town, Changping District, Beijing (Changping Demonstration Park)

### 2.4 General Description for Equipment under Test (EUT)

EUT Name	IIC MIFARE Module
Model Name Under Test	SL030_V3.1
Series Model Name	N/A
Description of Model name differentiation	N/A
Hardware Version	N/A
Software Version	N/A
Dimensions (Approx.)	N/A
Weight (Approx.)	N/A

### 2.5 Ancillary Equipment

Note: Not applicable.

## 2.6 Technical Information

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

Modulation Type	ASK
Frequency Range	13.56 MHz
Antenna Type	PCB Antenna
Exposure Category	General Population/Uncontrolled Exposure
EUT Stage	Mobile Device

### 3 SUMMARY OF TEST RESULT

#### 3.1 Test Standards

No.	Identity	Document Title
1	EN IEC 62311: 2020	Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz - 300 GHz)

## 4 DEVICE CATEGORY AND LEVELS LIMITS

The field calculation does not take into account the antenna size, which is assumed to be a point source. An ideal isotropic antenna is used as a reference to compare the performance of practical antennas:  $P$  watts is radiated, from a point, uniformly over the surface of sphere of radius  $r$ . The POINTING VECTOR gives the power density:

Assumed use distance from EUT to Human, **20 cm** separation distance warning is required. In this section, the power density at 20 cm location is calculated to examine if it is lower than the limit.

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

Where:

$S$  = power density

$P$  = output power (W)

$G$  = power gain of the antenna in the direction of interest relative to an isotropic radiator

$R$  = Separation distance between radiator and human body (m)

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 of the following limits.

### Compliance criteria

The electronic and electrotechnical apparatus shall comply with the basic restriction as specified in Annex II of Council Recommendation 1999/519/EC.

### 1999/519/EC Limit

Reference levels for electric, magnetic and electromagnetic fields  
(0 Hz to 300 GHz, unperturbed rms values)

Frequency range	E-field strength (V/m)	H-field strength (A/m)	B-field (μT)	Equivalent plane wave power density $S_{eq}$ (W/m <sup>2</sup> )
0-1 Hz	—	$3,2 \times 10^4$	$4 \times 10^4$	—
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

## 5 ASSESSMENT RESULT

### 5.1 Output Power

NFC		
Frequency (MHz)	Field Strength @10m (dBuV/m)	E-Filed (V/m)
13.56	41.08	0.0001
Note: This report listed the maximal case field strength value, please refer to Report No. BL-SZ2240685-406 for more details.		

### 5.2 Assessment Result

Mode	Max. Field Strength (dBuV/m)	E-Filed (V/m)	Limit of E-Filed (V/m)	Verdict
NFC	41.08	0.0001	28	Pass

### 5.3 Conclusion

This EUT is deemed to comply with the reference level limits by Council Recommendation 1999/519/EC, therefore the basic restrictions are compliant with human exposure limits.

## Statement

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--END OF REPORT--