

RF EXPOSURE Test Report

Product: LED COLORFUL SOUND
ATMOSPHERE CLOCK

Trade Mark: -

Model Number: S528

FCC ID: 2BDRX-S528

Prepared for

Dongguan Shuangjun Electronics Co., Ltd

No. 18 Zongdui Road, Dalingshan Town, Dongguan, Guangdong, China

Prepared by

Shenzhen HongBiao Certification& Testing Co., Ltd

Room 102, 201, Building 2, Yuanwanggu RFID Industrial Park, Tongguan
Road, Tianliao Community, Yutang Street, Guangming District, Shenzhen,
China

Tel.: +86-755-2998 9321 Fax.: +86-755-2998 5110

Website: <http://www.sz-hongbiao.com>

Table of Contents

1	GENERAL DESCRIPTION	5
1.1	DESCRIPTION OF EUT.....	5
1.2	TEST MODE.....	5
1.3	TEST SETUP.....	6
1.4	ANCILLARY EQUIPMENT	6
2	TEST FACILITIES AND ACCREDITATIONS	7
2.1	TEST LABORATORY	7
2.2	ENVIRONMENTAL CONDITIONS.....	7
2.3	MEASUREMENT UNCERTAINTY	7
2.4	TEST SOFTWARE.....	7
3	LIST OF TEST EQUIPMENT	8
4	RF EXPOSURE	9
4.1	MAXIMUM PERMISSIBLE EXPOSURE.....	9
1.1.4.	<i>Limit</i>	9
1.1.5.	<i>Test Procedures</i>	9
1.1.6.	<i>Test Setup</i>	10
1.1.7.	<i>Test Result</i>	10
	PHOTOGRAPHS OF THE TEST SETUP.....	11

TEST RESULT CERTIFICATION

Applicant's Name.....: Dongguan Shuangjun Electronics Co., Ltd
Address: No. 18 Zongdui Road, Dalingshan Town, Dongguan,
Guangdong, China

Manufacturer's Name: Dongguan Shuangjun Electronics Co., Ltd
Address: No. 18 Zongdui Road, Dalingshan Town, Dongguan,
Guangdong, China

Product description

Product name: LED COLORFUL SOUND ATMOSPHERE CLOCK
Model Number: S528

Standards.....: FCC CFR 47 PART 1 , 1.1310

Test procedure.....: KDB 680106 D01 RF Exposure Wireless Charging Apps v03r01

This device described above has been tested by Shenzhen HongBiao Certification& Testing Co., Ltd and the test results show that the equipment under test (EUT) is in compliance with the EMC requirements. And it is applicable only to the tested sample identified in the report.

Date of Test.....:

Date (s) of performance of tests.....: October 08, 2023~November 23, 2023

Test Result.....: **Pass**

Testing Engineer : _____
Zoe su
(Z o e S u)

Technical Manager : _____
Gary Lu
(Gary)

Authorized Signatory : _____
Leo su
(L e o S u)



1 General Description

1.1 Description of EUT

Product name:	LED COLORFUL SOUND ATMOSPHERE CLOCK
Model name:	S528
Series Model:	-
Different of series model:	-
Operation frequency:	110kHz-205kHz
Operational mode:	Wireless charging
Modulation type:	ASK
Antenna type:	Coil Antenna
Power supply:	DC 12V by adapter
Adapter information:	Model: QL024-1202000U Input: AC 100-240V~50/60Hz, 0.8A Output: DC 12V/2A Model: XY24U30-QC2 Input: AC 100-240V~50/60Hz, 0.6A Output: DC 5V/3A, DC 9V/2.66A, DC 12V/2A

1.2 Test Mode

Pretest Test Mode	Description of Mode
TM1	Wireless charging 15W
TM2	Wireless charging 10W
TM3	Wireless charging 5W

Note: All test modes were pre-tested, but we only recorded the worst case in this report.

1.3 Test Setup

See photographs of the test setup in the report for the actual setup and connections between EUT and support equipment.

1.4 Ancillary Equipment

Equipment	Model	S/N	Manufacturer
5W/10W/15W Dummy load	DL01	/	/
/	/	/	/
/	/	/	/
/	/	/	/

Equipment	Length (cm)	Shielded/Unshielded	With/Without Ferrite
/	/	/	/
/	/	/	/

2 Test Facilities and Accreditations

2.1 Test Laboratory

Test Site	Shenzhen HongBiao Certification& Testing Co., Ltd
Test Site Location	Room 102, 201, Building 2, Yuanwanggu RFID Industrial Park, Tongguan Road, Tianliao Community, Yutang Street, Guangming District, Shenzhen, China
Telephone:	(86-755) 2998 9321
Fax:	(86-755) 2998 5110
FCC Registration No.:	CN1341
A2LA Certificate No.:	6765.01

2.2 Environmental Conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature:	15°C~35°C
Relative Humidity:	20%~75%
Air Pressure:	98kPa~101kPa

2.3 Measurement Uncertainty

The reported uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95 %.

Measurement Frequency Range	U, (dB)	Note
RF frequency	2×10^{-5}	
RF power, conducted	± 0.57 dB	
Conducted emission(150kHz~30MHz)	± 2.5 dB	
Radiated emission(30MHz~1GHz)	± 4.2 dB	
Radiated emission (above 1GHz)	± 4.7 dB	
Temperature	± 1 degree	
Humidity	± 5 %	

2.4 Test Software

Software name	Manufacturer	Model	Version
EHP200-TS	Narda	EHP-200A	Rel 1.95

3 List of Test Equipment

Item	Equipment No.	Equipment name	Manufacturer	Model	Serial No.	Calibration date	Due date
1	HB-E073	Electric and Magnetic Field Analyzer	Narda	EHP-200A	180ZX11013	2023-06-09	2024-06-08

Note: the calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).

4 RF Exposure

4.1 Maximum Permissible Exposure

1.1.4. Limit

Frequency range(MHz)	Electric field strength(V/m)	Magnetic field strength(A/m)	Power density(mW/cm ²)	Averaging time(minutes)
(A) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	*100	6
3.0-30	1842/f	4.89/f	*900/f ²	6
30-300	61.4	0.163	1.0 6	6
300-1500			f/300	6
1500-100000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*100	30
1.34-30	824/f	2.19/f	*180/f ²	30
30-300	27.5	0.073	0.2	30
300-1500			f/1500	30
1500-100000			1	30
f = frequency in MHz * = Plane-wave equivalent power density				

1.1.5. Test Procedures

E and H-field measurements should be made with the center of the probe at a distance of 15 cm surrounding the device and 20 cm above the top surface of the primary/client pair.

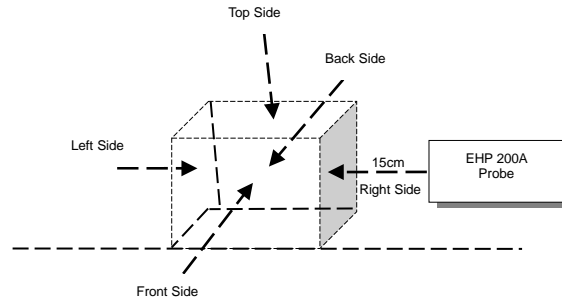
Record the test results.

KDB 680106 D01 RF Exposure Wireless Charging Apps v03r01:

- (1) Power transfer frequency is less than 1 MHz
Yes, the device operate in the frequency range from 110KHz to 205KHz.
- (2) Output power from each primary coil is less than or equal to 15 watts.
Yes, the maximum output power of the primary coil is 15W.
- (3) The system may consist of more than one source primary coils, charging one or more clients. If more than one primary coil is present, the coil pairs may be powered on at the same time.
No, the transfer system includes only one coils.
- (4) Client device is placed directly in contact with the transmitter.
Yes, client device is placed directly in contact with the transmitter.
- (5) Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).
The EUT is a mobile wireless charger.
- (6) The aggregate H-field strengths anywhere at or beyond 15 cm surrounding the device, and 20 cm away from the surface from all coils that by design can simultaneously transmit, and while those coils are simultaneously energized, are demonstrated to be less than 50% of the applicable MPE limit.
Yes, the EUT field strength levels are less 50% x MPE limit.

Note: The device is in compliance with KDB 680106 D01 RF Exposure Wireless Charging Apps v03r01 6 conditions.

1.1.6. Test Setup



1.1.7. Test Result

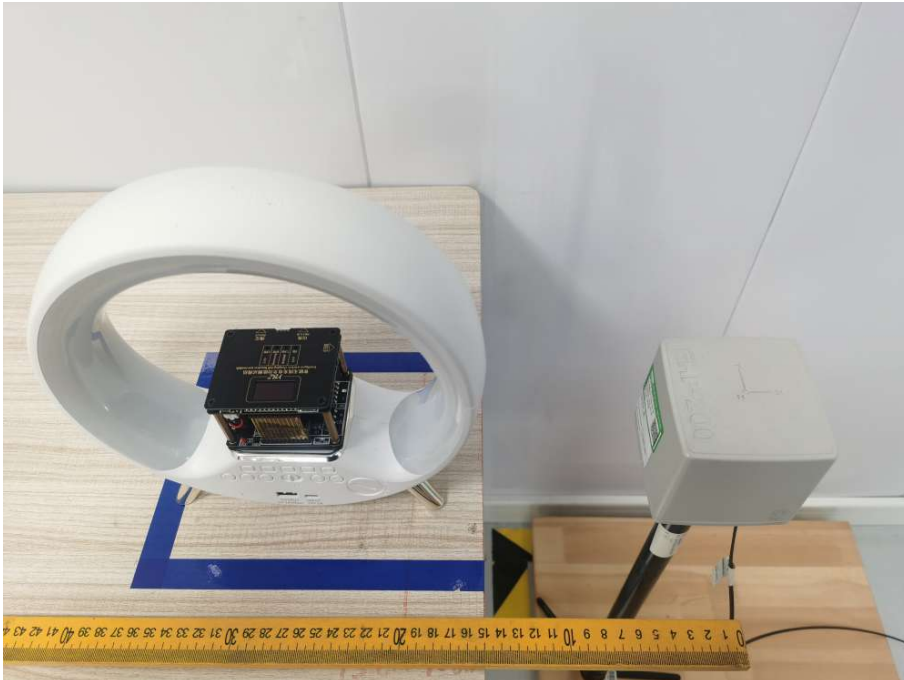
Maximum permissible Exposure				
Voltage	Test sides	Test distance(cm)	E-field(V/m)	H-field(A/m)
DC 12V	Top	20	1.879	0.213
DC 12V	Left	15	4.167	0.157
DC 12V	Right	15	6.273	0.173
DC 12V	Front	15	3.883	0.148
DC 12V	Back	15	1.926	0.133
Limit			614	1.63
50% Margin Limit			307	0.815

Photographs of the Test Setup

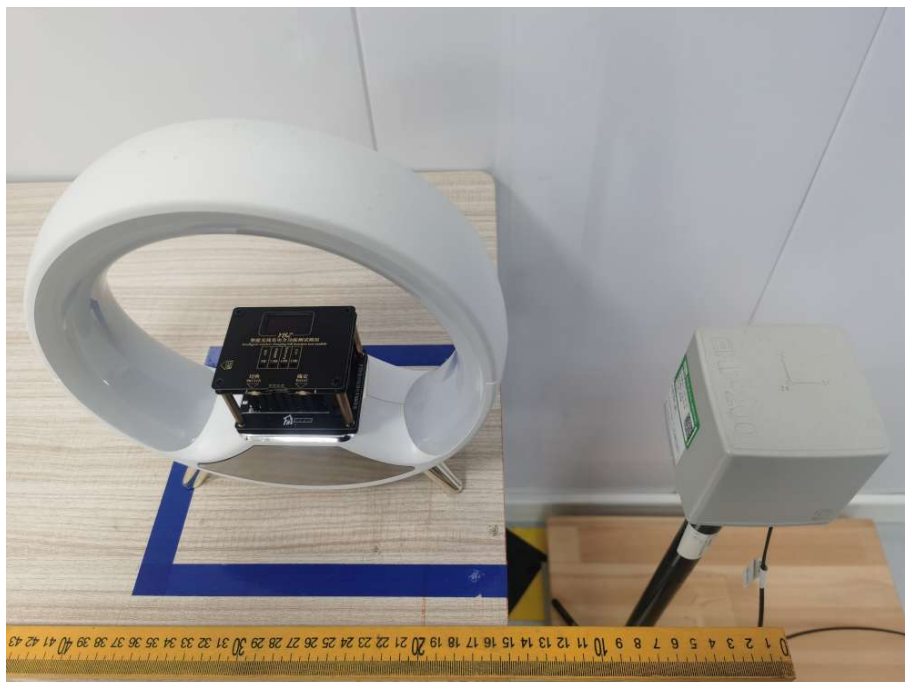
Top



Left



Right



Front



Back



***** END OF REPORT *****