

# MPE TEST REPORT

**Applicant** Shanghai Power Station Co., Ltd.  
**FCC ID** 2BEG5-GL056WA  
**Product** JUMP STARTER  
**Model** GL056WA  
**Report No.** R2401A0047-M1  
**Issue Date** January 25, 2024

TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **FCC Part 1 Subpart I (2023) / FCC Part 2 Subpart J (2023)**. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

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# 1 Test Laboratory

## 1.1 Notes of the Test Report

This report shall not be reproduced in full or partial, without the written approval of **TA Technology (Shanghai) Co., Ltd.** The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. Measurement Uncertainties were not taken into account and are published for informational purposes only. This report is written to support regulatory compliance of the applicable standards stated above.

## 1.2 Test Facility

### **FCC (Designation number: CN1179, Test Firm Registration Number: 446626)**

TA Technology (Shanghai) Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform measurements.

## 1.3 Testing Location

Company:	TA Technology (Shanghai) Co., Ltd.
Address:	Building 3, No.145, Jintang Rd, Pudong Shanghai, P.R.China
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## 1.4 Laboratory Environment

Temperature	Min. = 18°C, Max. = 25°C
Relative humidity	Min. = 20%, Max. = 80%
Ground system resistance	< 0.5 $\Omega$
Ambient noise is checked and found very low and in compliance with requirement of standards. Reflection of surrounding objects is minimized and in compliance with requirement of standards.	

## 2 Statement of Compliance

The Maximum Permissible Exposure (MPE) found during testing for the EUT is as follows:

Table 1: Maximum Permissible Exposure

FCC Limit	Maximum Permissible Exposure	Test Result
Magnetic Field (A/m)	Magnetic Field RMS (A/m)	
1.63	1.28	Pass
Date of Testing:	January 15, 2024 ~ January 17, 2024	
Date of Sample Received:	January 15, 2024	
Note: 1. All indications of Pass/Fail in this report are opinions expressed by TA Technology (Shanghai) Co., Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only.		

### 3 Description of Equipment Under Test

#### Client Information

<b>Applicant</b>	Shanghai Power Station Co., Ltd.
<b>Applicant address</b>	18th Building, No. 4916 South Hongmei Road, Minhang District, Shanghai, China
<b>Manufacturer</b>	Shanghai Power Station Co., Ltd.
<b>Manufacturer address</b>	18th Building, No. 4916 South Hongmei Road, Minhang District, Shanghai, China

#### General Technologies

<b>Model</b>	GL056WA
<b>Lab internal SN</b>	R2401A0047/S01
<b>HW Version</b>	N/A
<b>SW Version</b>	N/A
<b>Antenna Type</b>	Coil Antenna
<b>Modulation Type</b>	ASK
<b>Operating Frequency</b>	112kHz ~ 148kHz
<p>Note:</p> <p>1. The EUT is sent from the applicant to TA and the information of the EUT is declared by the applicant.</p>	

## 4 Test Specification, Methods and Procedures

FCC Part 1 Subpart I (2023)

FCC Part 2 Subpart J (2023)

KDB 680106 D01 Wireless Power Transfer v04

## 5 Equipment Under Test

### 5.1 Description of EUT

The EUT is a wireless charging device which has a single inductive charging coil. The charging frequency is between 112 kHz to 148 kHz, and the maximum power consumption is 10W.

### 5.2 KDB 680106 D01 v04 Equipment Approval Considerations

Requirement	Device
(1) The power transfer frequency is below 1 MHz	Yes. Operating Frequency is between 112-148kHz.
(2) The output power from each transmitting element (e.g., coil) is less than or equal to 15 watts	Yes. Maximum power is 10 Watts.
(3) A client device providing the maximum permitted load is placed in physical contact with the transmitter	Yes.
(4) Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).	No.
(5) The E-field and H-field strengths, at and beyond 20 cm surrounding the device surface, are demonstrated to be less than 50% of the applicable MPE limit, per KDB 447498, Table 1. These measurements shall be taken along the principal axes of the device, with one axis oriented along the direction of the estimated maximum field strength, and for three points per axis or until a 1/d (inverse distance from the emitter structure) field strength decay is observed. Symmetry considerations may be used for test reduction purposes. The device shall be operated in documented worst-case compliance scenarios (i.e., the ones that lead to the maximum field components), and while all the radiating structures (e.g., coils or antennas) that by design can simultaneously transmit are energized at their nominal maximum power.	Yes.
(6) For systems with more than one radiating structure, the conditions specified in (5) must be met when the system is fully loaded (i.e., clients absorbing maximum power available). and with all the radiating structures operating at maximum power at the same time, as per design conditions. If the design allows one or more radiating structures to be powered at a higher level while other radiating structures are not powered, then those cases must be tested as well. For instance, a device may use three RF coils powered at 5 W, or one coil powered at 15 W: in this case, both scenarios shall be tested.	Yes. The EUT includes only one radiating structure, and operating at maximum power



### 5.3 Description of Test Setup

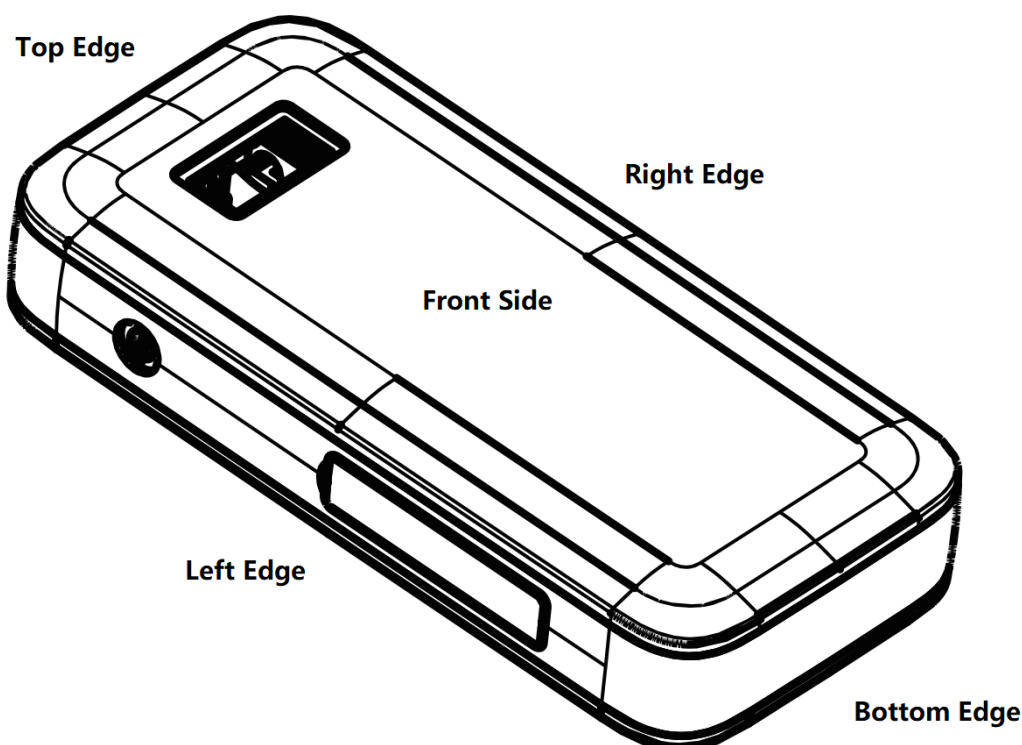
#### Support Equipment

Support Equipment & Peripherals List			
Description	Manufacturer	Model	Serial Number
Auxiliary equipment	APPLE INC.	iPhone 13	GYQV729N20

#### Measurement Setup

Measurement procedure was performed per FCC Guidance.

A	B	C	D	E	F	Test Distance (cm)
Bottom Edge	Right Edge	Top Edge	Left Edge	Front Side (Screen)	Back Side	
Test	Test	Test	Test	Test	Test	15
Test	Test	Test	Test	Test	Test	5
Test	Test	Test	Test	N/A	Test	4
Test	Test	Test	Test	N/A	Test	3
Test	Test	Test	Test	N/A	Test	2
Test	Test	Test	Test	N/A	Test	1
Test	Test	Test	Test	N/A	Test	0



## 6 Test and Measurement Equipment

The following test and measurement equipment was used for the tests documented in this report.

Description	Manufacturer	Model	Serial Number	Cal Date	Cal Due
Hygrothermograph	Anymetr	HTC - 1	TA2023A008	2023-05-13	2024-05-12
Electric and Magnetic Field Analyzer	Narda	EHP-200A	170WX91001	2023-06-07	2024-06-06

## 7 Maximum Permissible RF Exposure

### 7.1 FCC Limits and Summary

§ 1.1310 The criteria listed in following tables shall be used to evaluate the environmental impact of human exposure to radio-frequency (RF) radiation as specified in § 1.1307(b), except in the case of portable devices which shall be evaluated according to the provisions of § 2.1093 of this chapter.

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm <sup>2</sup> )	Averaging time (minutes)
<b>(A) Limits for Occupational/Controlled Exposures</b>				
0.3–3.0 .....	614	1.63	*(100)	6
3.0–30 .....	1842/f	4.89/f	*(900/f <sup>2</sup> )	6
30–300 .....	61.4	0.163	1.0	6
300–1500 .....	.....	.....	f/300	6
1500–100,000 .....	.....	.....	5	6
<b>(B) Limits for General Population/Uncontrolled Exposure</b>				
0.3–1.34 .....	614	1.63	*(100)	30
1.34–30 .....	824/f	2.19/f	*(180/f <sup>2</sup> )	30

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)—Continued

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm <sup>2</sup> )	Averaging time (minutes)
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

NOTE 1 TO TABLE 1: Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

NOTE 2 TO TABLE 1: General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or can not exercise control over their exposure.

## 7.2 Maximum Permissible Exposure Test Results

### H-Fiend Measurements

Note: RMS measurements were performed.

Frequency (kHz)	Probe Orientation (X, Y, Z)	Measuring Distance (cm)	Position	Maximum Permissible Exposure	MPE Limit (A/m)
				Magnetic Field RMS (A/m)	
112-148	Y	15	Back Side	0.0406	0.815
112-148	Y	15	Front Side	0.0473	0.815
112-148	Z	15	Left Edge	0.0514	0.815
112-148	Z	15	Right Edge	0.0484	0.815
112-148	Z	15	Top Edge	0.0502	0.815
112-148	Z	15	Bottom Edge	0.0503	0.815
112-148	Y	5	Back Side	0.2515	1.630
112-148	Y	5	Front Side	0.3836	1.630
112-148	Z	5	Left Edge	0.1063	1.630
112-148	Z	5	Right Edge	0.1636	1.630
112-148	Z	5	Top Edge	0.0590	1.630
112-148	Z	5	Bottom Edge	0.0867	1.630
112-148	Y	4	Back Side	0.2863	1.630
112-148	Y	4	Front Side	N/A	N/A
112-148	Z	4	Left Edge	0.1386	1.630
112-148	Z	4	Right Edge	0.2390	1.630
112-148	Z	4	Top Edge	0.0763	1.630
112-148	Z	4	Bottom Edge	0.1131	1.630
112-148	Y	3	Back Side	0.3741	1.630
112-148	Y	3	Front Side	N/A	N/A
112-148	Z	3	Left Edge	0.1841	1.630
112-148	Z	3	Right Edge	0.4095	1.630
112-148	Z	3	Top Edge	0.0996	1.630
112-148	Z	3	Bottom Edge	0.1374	1.630
112-148	Y	2	Back Side	0.7366	1.630
112-148	Y	2	Front Side	N/A	N/A
112-148	Z	2	Left Edge	0.2198	1.630
112-148	Z	2	Right Edge	0.5578	1.630
112-148	Z	2	Top Edge	0.1134	1.630
112-148	Z	2	Bottom Edge	0.1481	1.630
112-148	Y	1	Back Side	1.0589	1.630
112-148	Y	1	Front Side	N/A	N/A
112-148	Z	1	Left Edge	0.4404	1.630
112-148	Z	1	Right Edge	0.8080	1.630

112-148	Z	1	Top Edge	0.1705	1.630
112-148	Z	1	Bottom Edge	0.2019	1.630
112-148	Y	0	Back Side	<b>1.2780</b>	1.630
112-148	Y	0	Front Side	N/A	N/A
112-148	Z	0	Left Edge	0.7064	1.630
112-148	Z	0	Right Edge	1.0872	1.630
112-148	Z	0	Top Edge	0.2170	1.630
112-148	Z	0	Bottom Edge	0.2786	1.630

Note: The H-field strengths, at 15 cm surrounding the device surface, are demonstrated to be less than 50% of the MPE limit (0.815 A/m), and the other distance less than the MPE limit (1.630 A/m).

## ANNEX A: The EUT Appearance

The EUT Appearance are submitted separately.

## ANNEX B: Test Setup Photos

The Test Setup Photos are submitted separately.

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