



# MAXIMUM PERMISSIBLE EXPOSURE

## TEST REPORT

For

**Dongguan Keguangyang Trading Co., Ltd.**

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**FCC ID: 2A2GY-PA234A**

<b>Report Type:</b> Original Report	<b>Product Name:</b> FAST WIRELESS CHARGER STAND
<b>Report Number:</b> <u>DG2210729-31680EA</u>	
<b>Report Date:</b> <u>2021-08-24</u>	
Reviewed By: <u>Jacob Kong</u>	
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**FCC §1.1310, §2.1091- MAXIMUM PERMISSIBLE EXPOSURE (MPE)****Product Description for Equipment under Test (EUT)**

<b>EUT Name:</b>	FAST WIRELESS CHARGER STAND
<b>EUT Model:</b>	PA234A
<b>Operation Frequency:</b>	110.5-205kHz
<b>Maximum Wireless Output:</b>	15W
<b>Rated Input Voltage:</b>	DC 5V/2A, 9V/2A 12V/1.5A from USB port
<b>Serial Number:</b>	DG2210729-31680E-RF-S1
<b>EUT Received Date:</b>	2021.07.30
<b>EUT Received Status:</b>	Good

**Applicable Standard**

According to subpart §1.1310, 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 level in excess of the Commission's guidelines.

**Limits for Maximum Permissible Exposure (MPE) (§1.1310, §2.1091)**

<b>(B) Limits for General Population/Uncontrolled Exposure</b>				
<b>Frequency Range (MHz)</b>	<b>Electric Field Strength (V/m)</b>	<b>Magnetic Field Strength (A/m)</b>	<b>Power Density (mW/cm<sup>2</sup>)</b>	<b>Averaging Time (minutes)</b>
0.3–1.34	614	1.63	*(100)	30
1.34–30	824/f	2.19/f	*(180/f <sup>2</sup> )	30
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;

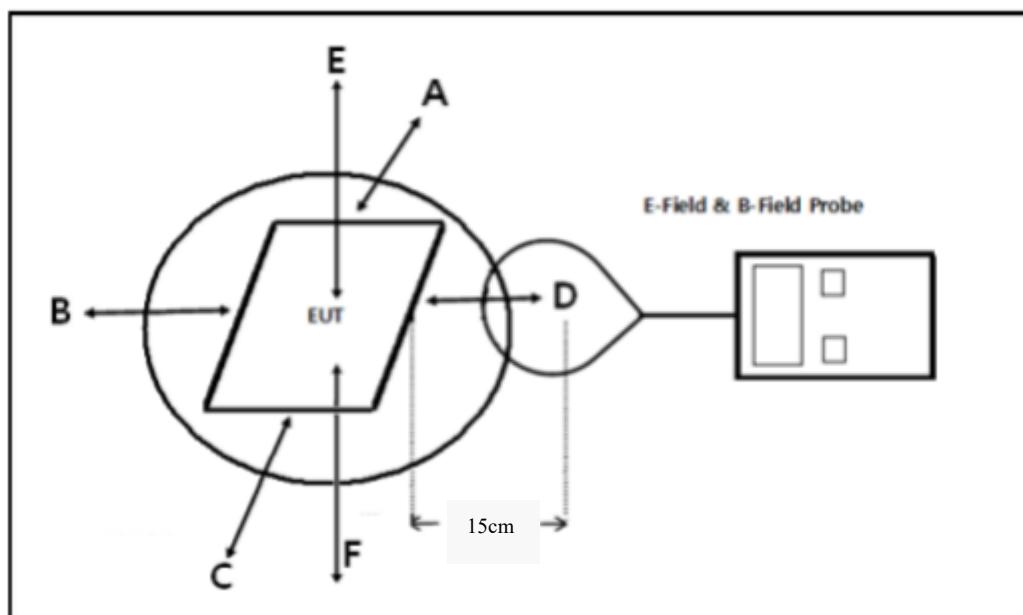
According with KDB 680106 D01 RF Exposure Wireless Charging Apps v03r01 clause 3 c)

c) For devices designed for typical desktop applications, such a wireless charging pads, RF exposure evaluation should be conducted assuming a user separation distance of 15 cm. E and H field strength measurements or numerical modeling may be used to demonstrate compliance. Measurements should be made from all sides and the top of the primary/client pair, with the 15 cm measured from the center of the probe(s) to the edge of the device. Emissions between 100 kHz to 300 kHz should be assessed versus the limits at 300 kHz in Table 1 of Section 1.1310: 614 V/m and 1.63 A/m. A KDB inquiry is required to determine the applicable exposure limits below 100 kHz.

According to KDB 680106 D01 RF Exposure Wireless Charging App v03r01 clause 5 b)

- (1) Power transfer frequency is less than 1 MHz
- (2) Output power from each primary coil is less than or equal to 15 watts.
- (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.
- (4) Client device is placed directly in contact with the transmitter.
- (5) Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).
- (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.

### Block Diagram of Test Setup



Note: 20 cm for Top test.

## Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Narda	Exposure Level Tester	ELT-400	N-0229	2019-11-19	2021-11-18
Narda	B Field Probe	ELT Probe 100cm <sup>2</sup>	M-0666	2019-11-19	2021-11-18
ETS-Lindgreen	Field Probe	HI-6005	6564158	2019-12-10	2022-12-09

\* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

## Test Data

### Environmental Conditions

Temperature:	25°C
Relative Humidity:	65 %
ATM Pressure:	101.0 kPa

*The testing was performed by Thea Xiao on 2021-08-24.*

*Test mode: Wireless Charging*

**DOWN Coil:**  
**H-Field Strength**

Frequency Range (kHz)	Position A (A/m)	Position B (A/m)	Position C (A/m)	Position D (A/m)	Position E (A/m)	50% Limit (A/m)	Limit (A/m)
110.5-205	0.7144	0.4296	0.4216	0.5288	0.6504	0.815	1.63

Note: Test with 15cm distance from the center of the probe(s) to the edge of the device, 20 cm for top test.

**E-Field Strength**

Frequency Range (kHz)	Position A (V/m)	Position B (V/m)	Position C (V/m)	Position D (V/m)	Position E (V/m)	50% Limit (V/m)	Limit (V/m)
110.5-205	0.568	0.579	0.689	0.782	0.814	307	614

Note: Test with 15cm distance from the center of the probe(s) to the edge of the device, 20 cm for top test.

**UP Coil:**  
**H-Field Strength**

Frequency Range (kHz)	Position A (A/m)	Position B (A/m)	Position C (A/m)	Position D (A/m)	Position E (A/m)	50% Limit (A/m)	Limit (A/m)
110.5-205	0.6512	0.3672	0.3856	0.4784	0.5928	0.815	1.63

Note: Test with 15cm distance from the center of the probe(s) to the edge of the device, 20 cm for top test.

**E-Field Strength**

Frequency Range (kHz)	Position A (V/m)	Position B (V/m)	Position C (V/m)	Position D (V/m)	Position E (V/m)	50% Limit (V/m)	Limit (V/m)
110.5-205	0.512	0.506	0.625	0.712	0.756	307	614

Note: Test with 15cm distance from the center of the probe(s) to the edge of the device, 20 cm for top test.

**Result: Pass**

**Considerations of compliance 680106 D01 RF Exposure Wireless Charging App v03r01 clause 5 b:**

**(1)** Power transfer frequency is less than 1 MHz.

Yes, the operation frequency is 110.5-205 kHz.

**(2)** Output power from each primary coil is less than or equal to 15 watts.

Yes, the maximum output power of primary coil is 15 Watts, no more than 15 watts.

**(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.

The transfer system consist two coils, only single primary coils to detect and allow coupling only between individual pairs of 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).

Yes, mobile exposure conditions only

**(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 test result for H and E-field strength less than 50% of the MPE limit.

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