

RF Exposure Evaluation

FCC ID: 2A6T7-59514

Measuring Standard

FCC Part 1(1.1310) and Part 2(2.1091)

KDB 680106 D01 RF Exposure Wireless Charging Base App v03

Test Configuration

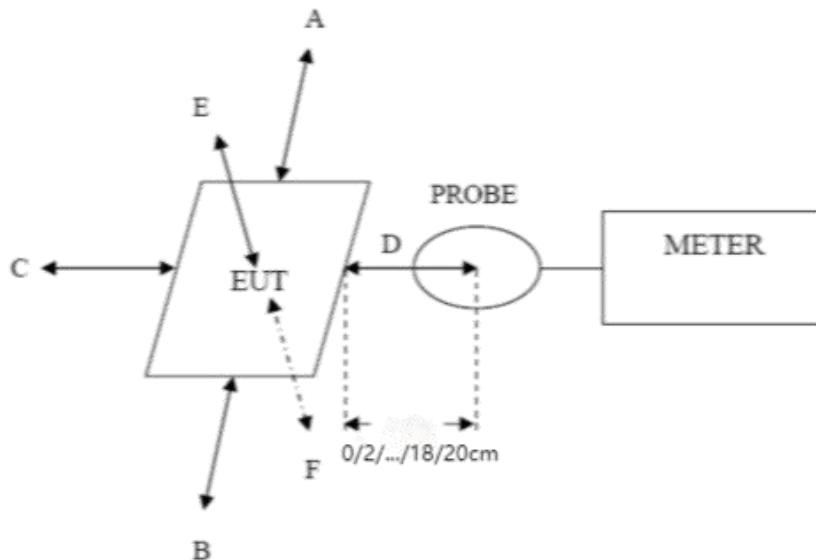
The test distance of Position E on the front side is 20cm, the test distance of Position A,B,C,D is 15cm using the equipment list above for determining compliance with the MPE requirements of FCC Part 1.1310.

The RF power density was measured at Under maximum load test.

The test distance of Position E on the front side is 20cm, the test distance of Position A,B,C,D is 15cm, the field probes were positioned at the location where there is maximum field strength. The maximum E-field and H-field is reported below.

This device uses a wireless charging circuit for power transfer operating at the frequency of 115KHz -205kHz. Thus, the 300kHz limits were used: E-field Limit = 614 (V/m); H-field limit = 1.63 (A/m).

TEST Setup





KSIGN(Guangdong) Testing Co, Ltd.

First Floor West Side, Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu Village, Shatou Community, Shajing Street, Bao'an District, Shenzhen City, Guangdong Province, P. R. China
Tel.: +(86) 755-2985 2678 Fax: +(86) 755-2985 2397 E-mail: info@gdkesign.cn Website: www.gdkesign.com

TEST Limits

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
300-1,500			f/300	6
1,500-100,000			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
300-1,500			f/1500	30
1,500-100,000			1.0	30

f = frequency in MHz * = Plane-wave equivalent power density

Measuring Device and Test Equipment

Description	Manufacturer	Model	S/N	Cal. Until
Probe FHP(1Hz-400KHz)	Narda Safety Test Solutions GmbH	EHP-50F	J-0015	Nov 01, 2022
PHONE 1	HUAWEI	P40	N/A	N/A

TEST MODE

MODE	TEST MODE DESCRIPTION	
Mode 1	Wireless Charging (Full load)	Recorded
Mode 2	Wireless Charging (Half load)	Recorded
Mode 3	Wireless Charging (Null load)	Recorded
Mode 4	Standby	Pre-tested

Note: All test modes were pre-tested, but we only recorded the worst case in this report. Mode 1 is the worst Mode

TEST RESULT

☒ Passed ☐ Not Applicable



KSIGN(Guangdong) Testing Co, Ltd.

First Floor West Side, Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu Village, Shatou Community, Shajing Street, Bao'an District, Shenzhen City, Guangdong Province, P. R. China
Tel.: +(86) 755-2985 2678 Fax: +(86) 755-2985 2397 E-mail: info@gdksign.cn Website: www.gdksign.com

EUT	Lithium Jump Starter	Model Name. :	HFT-120-4S
Pressure:	1010hPa	Test Date:	2022-05-13
Test Voltage:	Output:10W(Max)	Test Mode:	Mode 1 (worse case)

H-Field Strength at 0cm surrounding the EUT												
EUT Side	Frequency Range (kHz)	Probe A		Probe B		Probe C		Probe D		Probe E		Limits (A/m)
		A/m	uT	A/m	uT	A/m	uT	A/m	uT	A/m	uT	
Full load	115~205	0.50	0.63	0.67	0.84	0.62	0.78	0.54	0.68	0.67	0.84	1.63
Half load	115~205	0.43	0.54	0.54	0.68	0.55	0.69	0.49	0.61	0.62	0.78	
Null load	115~205	0.40	0.50	0.50	0.63	0.49	0.61	0.45	0.56	0.59	0.74	

H-Field Strength at 2cm surrounding the EUT												
EUT Side	Frequency Range (kHz)	Probe A		Probe B		Probe C		Probe D		Probe E		Limits (A/m)
		A/m	uT	A/m	uT	A/m	uT	A/m	uT	A/m	uT	
Full load	115~205	0.44	0.55	0.61	0.76	0.56	0.70	0.48	0.60	0.61	0.76	1.63
Half load	115~205	0.36	0.45	0.47	0.59	0.48	0.60	0.42	0.53	0.55	0.69	
Null load	115~205	0.33	0.41	0.43	0.54	0.42	0.53	0.38	0.48	0.52	0.65	

H-Field Strength at 4cm surrounding the EUT												
EUT Side	Frequency Range (kHz)	Probe A		Probe B		Probe C		Probe D		Probe E		Limits (A/m)
		A/m	uT	A/m	uT	A/m	uT	A/m	uT	A/m	uT	
Full load	115~205	0.39	0.49	0.56	0.70	0.51	0.64	0.43	0.54	0.56	0.70	1.63
Half load	115~205	0.32	0.40	0.43	0.54	0.44	0.55	0.38	0.48	0.51	0.64	
Null load	115~205	0.29	0.36	0.39	0.49	0.38	0.48	0.34	0.43	0.48	0.60	



KSIGN(Guangdong) Testing Co, Ltd.

First Floor West Side, Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu Village, Shatou Community, Shajing Street, Bao'an District, Shenzhen City, Guangdong Province, P. R. China
Tel.: +(86) 755-2985 2678 Fax: +(86) 755-2985 2397 E-mail: info@gdksign.cn Website: www.gdksign.com

H-Field Strength at 6cm surrounding the EUT												
EUT Side	Frequency Range (kHz)	Probe A		Probe B		Probe C		Probe D		Probe E		Limits (A/m)
		A/m	uT	A/m	uT	A/m	uT	A/m	uT	A/m	uT	
Full load	115~205	0.34	0.43	0.51	0.64	0.46	0.58	0.38	0.48	0.51	0.64	1.63
Half load	115~205	0.27	0.34	0.38	0.48	0.39	0.49	0.33	0.41	0.46	0.58	
Null load	115~205	0.24	0.30	0.34	0.43	0.33	0.41	0.29	0.36	0.43	0.54	

H-Field Strength at 8cm surrounding the EUT												
EUT Side	Frequency Range (kHz)	Probe A		Probe B		Probe C		Probe D		Probe E		Limits (A/m)
		A/m	uT	A/m	uT	A/m	uT	A/m	uT	A/m	uT	
Full load	115~205	0.30	0.38	0.47	0.59	0.42	0.53	0.34	0.43	0.47	0.59	1.63
Half load	115~205	0.22	0.28	0.33	0.41	0.34	0.43	0.28	0.35	0.41	0.51	
Null load	115~205	0.19	0.24	0.29	0.36	0.28	0.35	0.24	0.30	0.38	0.48	

H-Field Strength at 10cm surrounding the EUT												
EUT Side	Frequency Range (kHz)	Probe A		Probe B		Probe C		Probe D		Probe E		Limits (A/m)
		A/m	uT	A/m	uT	A/m	uT	A/m	uT	A/m	uT	
Full load	115~205	0.27	0.34	0.44	0.55	0.39	0.49	0.31	0.39	0.44	0.55	1.63
Half load	115~205	0.20	0.25	0.31	0.39	0.32	0.40	0.26	0.33	0.39	0.49	
Null load	115~205	0.16	0.20	0.26	0.33	0.25	0.31	0.21	0.26	0.35	0.44	



KSIGN(Guangdong) Testing Co, Ltd.

First Floor West Side, Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu Village, Shatou Community, Shajing Street, Bao'an District, Shenzhen City, Guangdong Province, P. R. China
Tel.: +(86) 755-2985 2678 Fax: +(86) 755-2985 2397 E-mail: info@gdksign.cn Website: www.gdksign.com

H-Field Strength at 12cm surrounding the EUT												
EUT Side	Frequency Range (kHz)	Probe A		Probe B		Probe C		Probe D		Probe E		Limits (A/m)
		A/m	uT	A/m	uT	A/m	uT	A/m	uT	A/m	uT	
Full load	115~205	0.24	0.30	0.41	0.51	0.36	0.45	0.28	0.35	0.41	0.51	1.63
Half load	115~205	0.17	0.21	0.28	0.35	0.29	0.36	0.23	0.29	0.36	0.45	
Null load	115~205	0.13	0.16	0.23	0.29	0.22	0.28	0.18	0.23	0.32	0.40	

H-Field Strength at 14cm surrounding the EUT												
EUT Side	Frequency Range (kHz)	Probe A		Probe B		Probe C		Probe D		Probe E		Limits (A/m)
		A/m	uT	A/m	uT	A/m	uT	A/m	uT	A/m	uT	
Full load	115~205	0.21	0.26	0.38	0.48	0.33	0.41	0.25	0.31	0.38	0.48	1.63
Half load	115~205	0.14	0.18	0.25	0.31	0.26	0.33	0.20	0.25	0.33	0.41	
Null load	115~205	0.12	0.15	0.22	0.28	0.21	0.26	0.17	0.21	0.31	0.39	

H-Field Strength at 16cm surrounding the EUT												
EUT Side	Frequency Range (kHz)	Probe A		Probe B		Probe C		Probe D		Probe E		Limits (A/m)
		A/m	uT	A/m	uT	A/m	uT	A/m	uT	A/m	uT	
Full load	115~205	0.18	0.23	0.35	0.44	0.30	0.38	0.22	0.28	0.35	0.44	1.63
Half load	115~205	0.11	0.14	0.22	0.28	0.23	0.29	0.17	0.21	0.30	0.38	
Null load	115~205	0.09	0.11	0.19	0.24	0.18	0.23	0.14	0.18	0.28	0.35	



KSIGN(Guangdong) Testing Co, Ltd.

First Floor West Side, Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu Village, Shatou Community, Shajing Street, Bao'an District, Shenzhen City, Guangdong Province, P. R. China
Tel.: +(86) 755-2985 2678 Fax: +(86) 755-2985 2397 E-mail: info@gdksign.cn Website: www.gdksign.com

H-Field Strength at 18cm surrounding the EUT												
EUT Side	Frequency Range (kHz)	Probe A		Probe B		Probe C		Probe D		Probe E		Limits (A/m)
		A/m	uT	A/m	uT	A/m	uT	A/m	uT	A/m	uT	
Full load	115~205	0.15	0.19	0.32	0.40	0.27	0.34	0.19	0.24	0.32	0.40	1.63
Half load	115~205	0.09	0.11	0.20	0.25	0.21	0.26	0.15	0.19	0.28	0.35	
Null load	115~205	0.07	0.09	0.17	0.21	0.16	0.20	0.12	0.15	0.26	0.33	

H-Field Strength at 20cm surrounding the EUT												
EUT Side	Frequency Range (kHz)	Probe A		Probe B		Probe C		Probe D		Probe E		Limits (A/m)
		A/m	uT	A/m	uT	A/m	uT	A/m	uT	A/m	uT	
Full load	115~205	0.12	0.15	0.29	0.36	0.24	0.30	0.16	0.20	0.29	0.36	1.63
Half load	115~205	0.05	0.06	0.16	0.20	0.17	0.21	0.11	0.14	0.24	0.30	
Null load	115~205	0.03	0.04	0.13	0.16	0.12	0.15	0.08	0.10	0.22	0.28	

Note: Calculation: $A/m = uT/1.25$

Remark: The device meets the mobile RF exposure limit at a 15cm separation distance as specified in §2.1091 of the FCC Rules.

Note: Only the Mode1 worst case modes is recorded in the report.



KSIGN(Guangdong) Testing Co, Ltd.

First Floor West Side, Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu Village,
Shatou Community, Shajing Street, Bao'an District, Shenzhen City, Guangdong Province, P. R. China
Tel.: +(86) 755-2985 2678 Fax: +(86) 755-2985 2397 E-mail: info@gdksign.cn Website: www.gdksign.com

PHOTOGRAPHS OF TEST SETUP

Position E

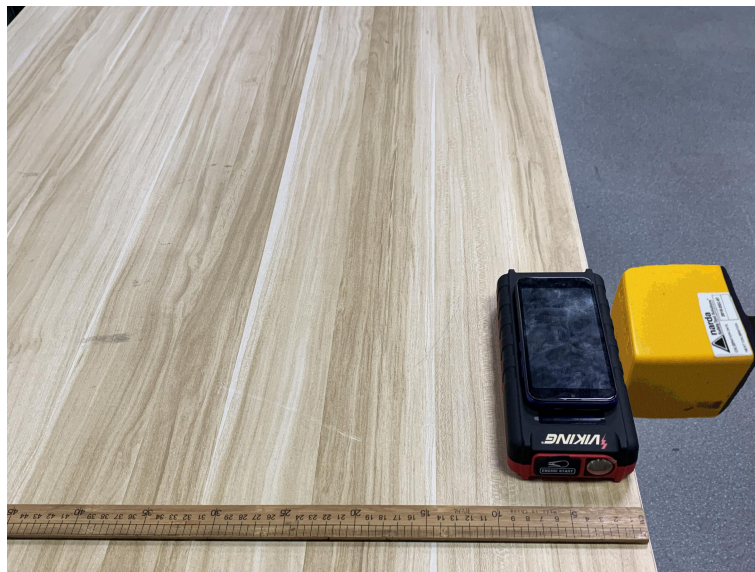




KSIGN(Guangdong) Testing Co, Ltd.

First Floor West Side, Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu Village,
Shatou Community, Shajing Street, Bao'an District, Shenzhen City, Guangdong Province, P. R. China
Tel.: +(86) 755-2985 2678 Fax: +(86) 755-2985 2397 E-mail: info@gdksign.cn Website: www.gdksign.com

Position A

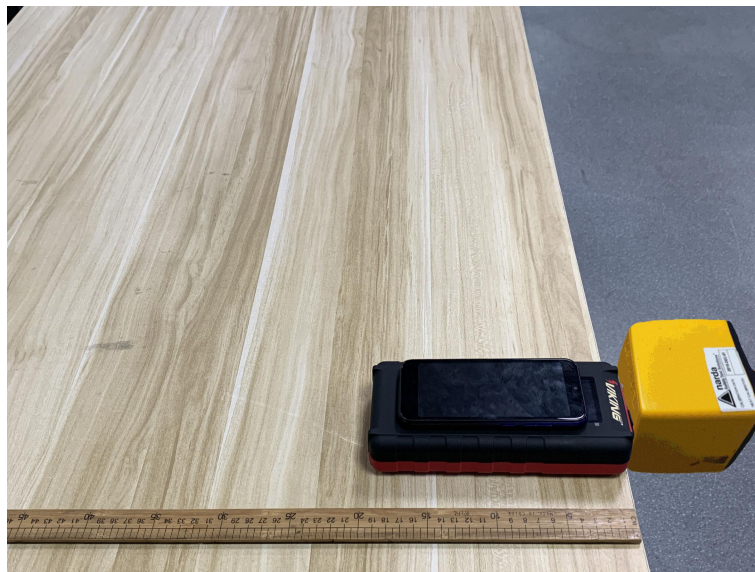




KSIGN(Guangdong) Testing Co, Ltd.

First Floor West Side, Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu Village,
Shatou Community, Shajing Street, Bao'an District, Shenzhen City, Guangdong Province, P. R. China
Tel.: +(86) 755-2985 2678 Fax: +(86) 755-2985 2397 E-mail: info@gdksign.cn Website: www.gdksign.com

Position B

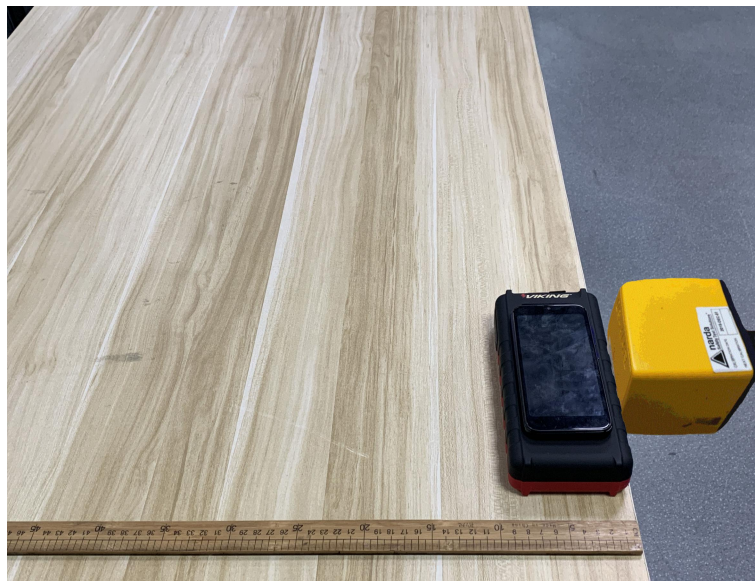




KSIGN(Guangdong) Testing Co, Ltd.

First Floor West Side, Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu Village,
Shatou Community, Shajing Street, Bao'an District, Shenzhen City, Guangdong Province, P. R. China
Tel.: +(86) 755-2985 2678 Fax: +(86) 755-2985 2397 E-mail: info@gdksign.cn Website: www.gdksign.com

Position C

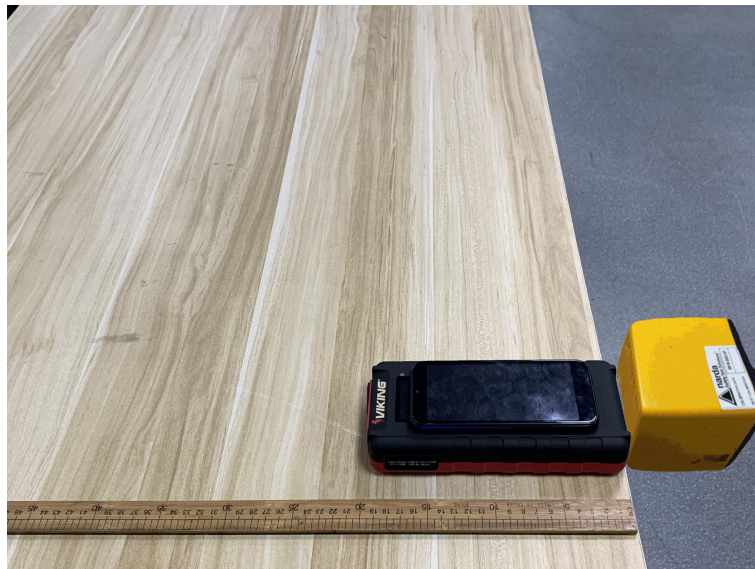




KSIGN(Guangdong) Testing Co, Ltd.

First Floor West Side, Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu Village,
Shatou Community, Shajing Street, Bao'an District, Shenzhen City, Guangdong Province, P. R. China
Tel.: +(86) 755-2985 2678 Fax: +(86) 755-2985 2397 E-mail: info@gdksign.cn Website: www.gdksign.com

Position D



*****THE END*****