

RF EXPOSURE TEST REPORT

APPLICANT : Shenzhen Minyao Technology Co., Ltd.

PRODUCT NAME : Magentic & Wireless Powerbank

MODEL NAME : A003

BRAND NAME : ./.

FCC ID : 2A47R-A003

47 CFR Part 1.1307

STANDARD(S) : **47 CFR Part 2.1093**
KDB447498D01 General RF Exposure
Guidance v06

Report No. **EFGX22090351-IE-01-E02**

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1. General information

1.1. Notes

The results of this test report relate exclusively to the item tested as specified in chapter "Description of test item" and are not transferable to any other test items.

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Operator:

2022-12-15		Bruce Zheng / Project Engineer	
Date	Eurofins-Lab.	Name / Title	Signature

Technical responsibility for area of testing:

2022-12-15		Albert Xu / Lab Manager	
Date	Eurofins	Name / Title	Signature

1.2. Testing laboratory

Eurofins Electrical Testing Service (Shenzhen) Co., Ltd.

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The Laboratory has passed the Accreditation by the American Association for Laboratory Accreditation (A2LA). The Accreditation number is 5376.01

The Laboratory has been listed by industry Canada to perform electromagnetic emission measurements, The CAB identifier is CN0088

1.3. Details of applicant

Name : Shenzhen Minyao Technology Co., Ltd.
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1.4. Details of manufacturer

Name : Fab-Chain Service Co.,Ltd.
Address : 5th Floor, Building A, ChuangJian industrial Park, Yingrenshi,
ShiYan BaoAn, Shenzhen, GuangDong,P.R.China
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2. Requirement

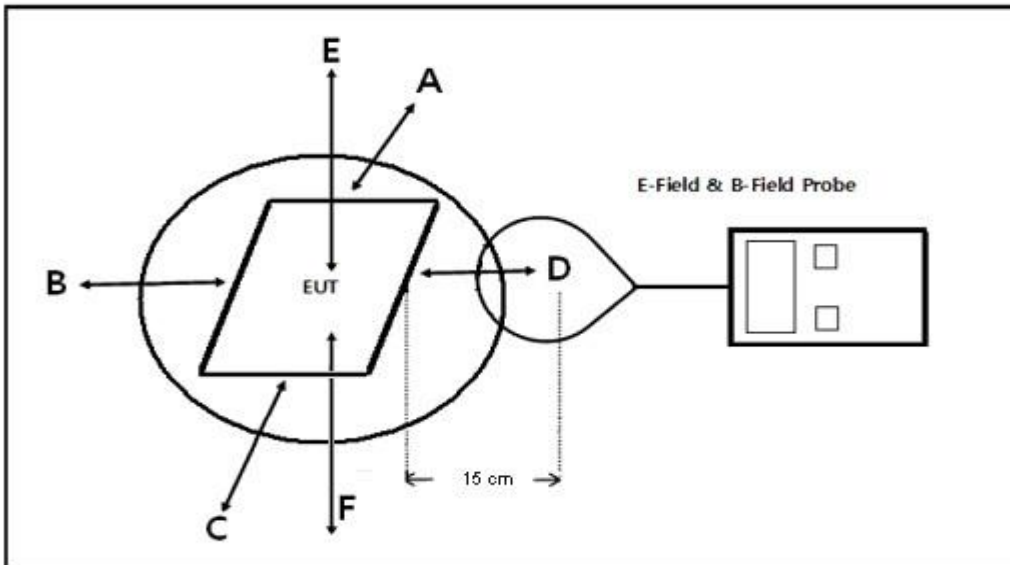
2.1. Limit

Frequency Range (MHz)	E-field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (Minutes)
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 -- 100,000	--	--	1.0	30

2.2. Method of measurement

- The RF exposure test was performed in shielded chamber.
- The measurement probe was placed at test distance from 0cm to 20cm , in 2 cm minimum increment measured from the edge of the device, with one axis coincident with the axis of the main coil
- The measurement probe used to search of highest strength.
- The highest emission level was recorded and compared with limit as soon as measurement of each points (A, B, C, D, E) were completed.
- The EUT were measured according to the dictates of KDB 680106D01v03r01.

2.3. Block diagram of test setup



Note: As bottom point is not required to test for desktop devices, so we scanning all the surfaces and recorded the worst level in F.

2.4. Equipment approval considerations

The EUT does comply with KDB 680106D01v03r01.

- 1) Power transfer frequency is less than 1MHz.
Yes; The device operated 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 each primary coil is 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.
Yes; The transfer system includes only single 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).
No; The EUT is a portable device.
- 6) The aggregate H-field strengths at 15 cm surrounding the device and 20 cm above the top surface from all simultaneous transmitting coils are demonstrated to be less than 50% of the MPE limit.
Yes; The EUT field strength levels are less than 50% of the MPE limit.

2.5. Measuring instrument used

EQUIPMENT ID	EQUIPMENT NAME	MODEL NO.	CAL. DUE DATE
23-1-16-007	Exposure Lever Tester	ELT-400	2023-06-12

2.6. E field and H field strength test result

Test mode for wireless charger:

Config	Test Mode	Description
Mode 1	Standby	Wireless Charger powered by adapter.
Mode 2	Operating	Wireless Charger powered by adapter and with wireless charging load at center.
Mode 3	Operating	Wireless Charger powered by adapter and with wireless charging load and 3mm airgap at center.
Mode 4	Standby	Wireless Charger powered by battery.
Mode 5	Operating	Wireless Charger powered by battery with wireless charging load at center

Note:

1. Load 15W, 20-50% power charging.

H-Filed Strength at 0 cm from the edges surrounding the EUT and 0 cm above the top surface of the EUT

Test Position	H-Filed Strength Measure Result			Limits (A/m)
	Mode 1	Mode 2	Mode 3	
	A/m			
A	0.7489	0.1288	0.5391	1.63
B	0.4821	0.2451	0.4994	1.63
C	0.3468	0.1909	0.4692	1.63
D	0.2896	0.0854	0.6312	1.63
E	0.1447	0.0421	0.3452	1.63
F	0.3257	0.3962	0.4117	1.63

H-Filed Strength at 2 cm from the edges surrounding the EUT and 2 cm above the top surface of the EUT

Test Position	H-Filed Strength Measure Result			Limits (A/m)
	Mode 1	Mode 2	Mode 3	
	A/m			
A	0.5215	0.0345	0.4782	1.63
B	0.1210	0.1346	0.1244	1.63
C	0.4235	0.0408	0.4072	1.63
D	0.0954	0.0751	0.1761	1.63
E	0.0271	0.0284	0.0776	1.63
F	0.5231	0.1431	0.4871	1.63

H-Filed Strength at 4 cm from the edges surrounding the EUT and 4 cm above the top surface of the EUT

Test Position	H-Filed Strength Measure Result			Limits (A/m)
	Mode 1	Mode 2	Mode 3	
	A/m			
A	0.4820	0.0451	0.5231	1.63
B	0.4423	0.3513	0.5873	1.63
C	0.3310	0.0671	0.3576	1.63
D	0.0451	0.0541	0.1138	1.63
E	0.0351	0.0361	0.1573	1.63
F	0.6125	0.2561	0.5366	1.63

H-Filed Strength at 6 cm from the edges surrounding the EUT and 6 cm above the top surface of the EUT

Test Position	H-Filed Strength Measure Result			Limits (A/m)
	Mode 1	Mode 2	Mode 3	
	A/m			
A	0.3421	0.0421	0.5251	1.63
B	0.4123	0.2341	0.6852	1.63
C	0.6420	0.0568	0.4125	1.63
D	0.2120	0.0571	0.3535	1.63
E	0.1412	0.0973	0.5383	1.63
F	0.6531	0.2315	0.3512	1.63

H-Filed Strength at 8 cm from the edges surrounding the EUT and 8 cm above the top surface of the EUT

Test Position	H-Filed Strength Measure Result			Limits (A/m)
	Mode 1	Mode 2	Mode 3	
	A/m			
A	0.3512	0.1563	0.6231	1.63
B	0.4612	0.1524	0.6975	1.63
C	0.5721	0.0519	0.7341	1.63
D	0.3415	0.0731	0.4215	1.63
E	0.5231	0.0842	0.6247	1.63
F	0.6314	0.3512	0.4842	1.63

H-Filed Strength at 10 cm from the edges surrounding the EUT and 10 cm above the top surface of the EUT

Test Position	H-Filed Strength Measure Result			Limits (A/m)
	Mode 1	Mode 2	Mode 3	
	A/m			
A	0.4258	0.1325	0.3526	1.63
B	0.5672	0.1864	0.6422	1.63
C	0.3521	0.0693	0.6246	1.63
D	0.4829	0.0964	0.4976	1.63
E	0.5003	0.0351	0.4964	1.63
F	0.3257	0.5627	0.4378	1.63

H-Filed Strength at 12 cm from the edges surrounding the EUT and 12 cm above the top surface of the EUT

Test Position	H-Filed Strength Measure Result			Limits (A/m)
	Mode 1	Mode 2	Mode 3	
	A/m			
A	0.3873	0.1064	0.5617	1.63
B	0.6965	0.1636	0.6833	1.63
C	0.5831	0.0803	0.6674	1.63
D	0.4443	0.0443	0.3984	1.63
E	0.5869	0.0994	0.4434	1.63
F	0.3424	0.6371	0.4229	1.63

H-Filed Strength at 14 cm from the edges surrounding the EUT and 14 cm above the top surface of the EUT

Test Position	H-Filed Strength Measure Result			Limits (A/m)
	Mode 1	Mode 2	Mode 3	
	A/m			
A	0.4126	0.1021	0.7692	1.63
B	0.6281	0.1325	0.4629	1.63
C	0.3219	0.1965	0.3213	1.63
D	0.4643	0.1733	0.6742	1.63
E	0.6532	0.3743	0.1515	1.63
F	0.4326	0.4512	0.4265	1.63

H-Filed Strength at 16 cm from the edges surrounding the EUT and 16 cm above the top surface of the EUT

Test Position	H-Filed Strength Measure Result			Limits (A/m)
	Mode 1	Mode 2	Mode 3	
	A/m			
A	0.3251	0.2314	0.4945	1.63
B	0.2455	0.1852	0.4432	1.63
C	0.5136	0.1347	0.5957	1.63
D	0.4823	0.1235	0.3426	1.63
E	0.3512	0.5724	0.3523	1.63
F	0.4809	0.3451	0.3571	1.63

H-Filed Strength at 18 cm from the edges surrounding the EUT and 18 cm above the top surface of the EUT

Test Position	H-Filed Strength Measure Result			Limits (A/m)
	Mode 1	Mode 2	Mode 3	
	A/m			
A	0.2341	0.3519	0.5182	1.63
B	0.3375	0.2583	0.3041	1.63
C	0.3251	0.4718	0.4754	1.63
D	0.6731	0.3561	0.4945	1.63
E	0.6842	0.3408	0.3287	1.63
F	0.4215	0.3321	0.3463	1.63

H-Filed Strength at 20 cm from the edges surrounding the EUT and 20 cm above the top surface of the EUT

Test Position	H-Filed Strength Measure Result			Limits (A/m)
	Mode 1	Mode 2	Mode 3	
	A/m			
A	0.4713	0.5722	0.6935	1.63
B	0.3698	0.3261	0.5824	1.63
C	0.3350	0.5938	0.4983	1.63
D	0.3572	0.4591	0.3593	1.63
E	0.5986	0.3897	0.4946	1.63
F	0.4794	0.3494	0.3907	1.63