

RF EXPOSURE TEST REPORT

Applicant	ENESCO PROPERTIES, LLC DBA THINGS REMEMBERED
Address	26301 Curtiss Wright Parkway, Suite 400 Richmond Heights, Ohio United States 44143

Manufacturer or Supplier	Shenzhen M-Queen Electronics Co., Ltd.
Address	South Block Fl.5th, Bld.A2, Xin'An 2nd Industrial Zone, Xixiang, Bao'an, Shenzhen
Product	Mouse Pad wireless charger
Brand Name	N/A
Model	MQ-W14 (SKU No.: 362992)
Additional Model & Model Difference	N/A
Date of tests	Aug. 02, 2021 ~ Sep. 01, 2021

The submitted sample of the above equipment has been tested according to the requirements of the following standard:

- ☒ 47 CFR PART 1, Subpart I, Section 1.1310
- ☒ KDB 680106 D01

CONCLUSION: The submitted sample was found to COMPLY with the test requirement

Tested by Lucas Chen Project Engineer / EMC Department	Approved by Glyn He Assistant Manager / EMC Department
	
	Data: Sep. 27, 2021

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Test Report No.: FM2108WDG0014-1

RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
FM2108WDG0014-1	Original release	Sep. 27, 2021

1. GENERAL INFORMATION

1.1. GENERAL DESCRIPTION OF EUT

FCC ID	2A239SCRFET
PRODUCT	Mouse Pad wireless charger
MODEL NO.	MQ-W14 (SKU No.: 362992)
ADDITIONAL MODEL	N/A
SAMPLE STATUS	Engineering sample
POWER SUPPLY	Input: DC 5V/2A from USB Host Unit or DC 9V/1A from USB Host Unit. Output: 5W/7.5W/10W
MODULATION TECHNOLOGY	FSK
OPERATING FREQUENCY	111KHz ~ 205KHz
ANTENNA TYPE	Coil Antenna
I/O PORTS	Refer to user's manual
CABLE SUPPLIED	USB Line: Unshielded, Detachable, 95cm

NOTES:

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
2. For the test results, the EUT had been tested with all conditions, but only the worst case was shown in test report.
3. Please refer to the EUT photo document (Reference No.: 2108WDG0014-1) for detailed product photo.

2. RF EXPOSURE MEASUREMENT

2.1 LIMITS

§ 1.1310 The criteria listed in table 1 shall be used to evaluate the environmental impact of human exposure to radiofrequency(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 ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
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
300–1500			f/300	6
1500–100,000			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
300–1500			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.

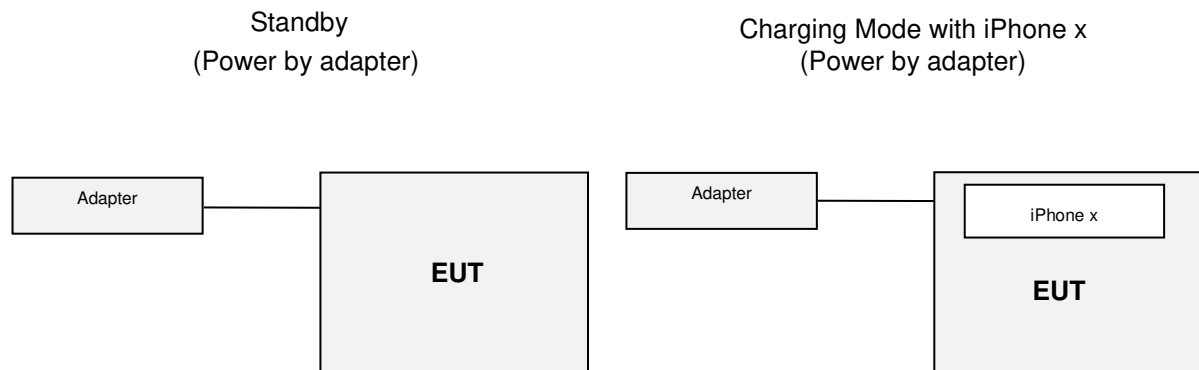
NOTE 2 TO TABLE 1: General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or can not exercise control over their exposure.

2.2 DESCRIPTION OF SUPPORT UNITS

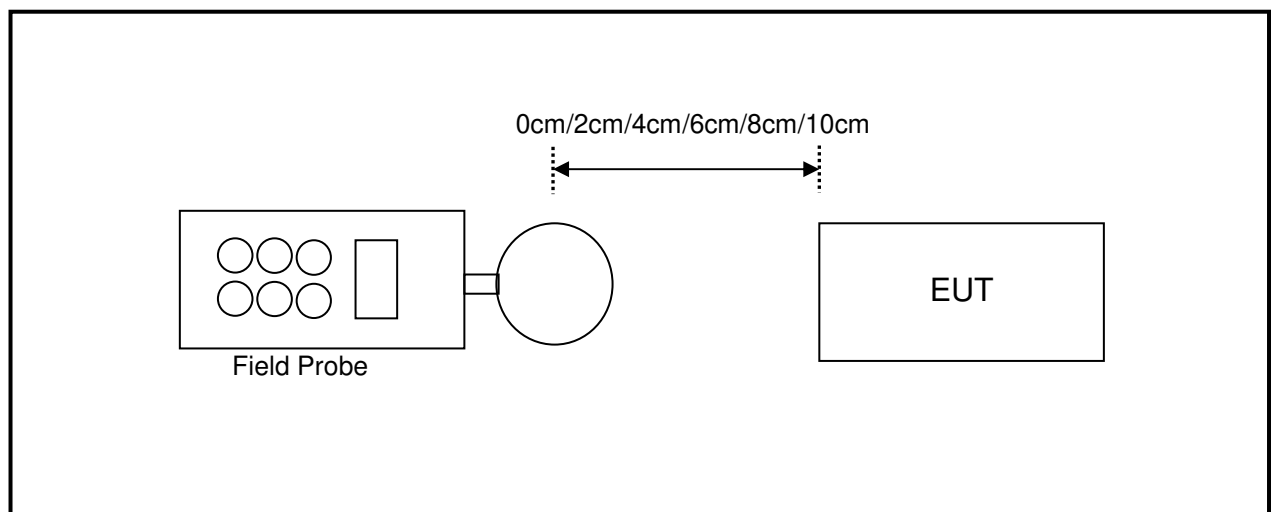
The EUT has been tested with associated equipment below

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	Adapter	GOTO	DSA-18QFB FEU A	N/A	N/A
2	iPhone X	Apple	MQA52CH/A	N/A	N/A

2.3 CONFIGURATION OF SYSTEM UNDER TEST



2.4 TEST SETUP FOR WPC

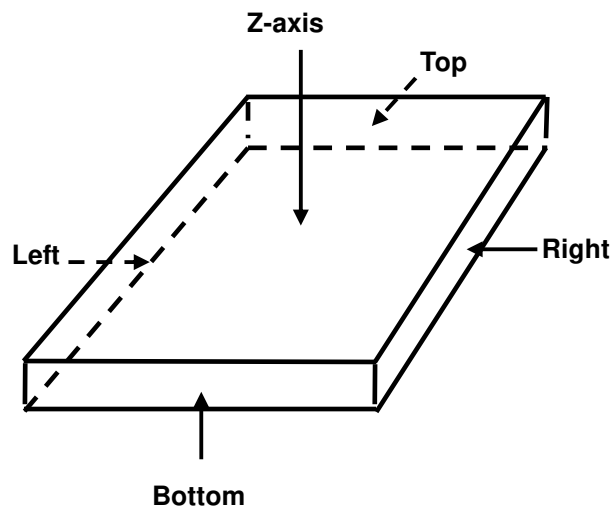


Note: Measurements should be made from all sides and the top of the primary/client pair, with the 0cm, 2 cm, 4cm, 6cm, 8cm, or 10 cm measured from the center of the probe(s) to the edge of the device.

**2.5 EQUIPMENTS USED DURING TEST**

Item	Test Equipment	Manufacturer	Model No.	Frequency Range	Next Cal.
1	3m Semi-Anechoic Chamber	ETS-LINDGREN	7m*4m*3m	NSEMC003	2022-03-19
2	Narda Broadband Field Meter	Narda	NBM-520	100KHz-90GHz	2021-12-23
3	E-Field probe	Narda	EF0691	100KHz-6GHz	2021-12-23
4	Exposure Level Tester	Narda	ELT-400	1Hz-400KHz	2021-12-23

NOTES: 1. The test was performed in RS chamber.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.

2.6 TEST POINT DESCRIPTION

2.7 TEST RESULTS

Mode 1 Standby (distance 0 cm)

E-Field Measurement					
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-Field(V/m)	0.79	0.18	0.62	0.71	0.54
Limit(V/m)	614	614	614	614	614
Margin (V/m)	-613.21	-613.82	-613.38	-613.29	-613.46
50% Limit (V/m)	307	307	307	307	307
50% Margin (V/m)	-306.21	-306.82	-306.38	-306.29	-306.46

H-Field Measurement					
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-Field(uT)	0.32	0.22	0.27	0.24	0.38
Max H-Field(A/m)	0.255	0.175	0.215	0.191	0.303
Limit(A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.375	-1.455	-1.415	-1.439	-1.327
50% Limit (A/m)	0.815	0.815	0.815	0.815	0.815
50% Margin (A/m)	-0.560	-0.640	-0.600	-0.624	-0.512

Measurements was made from all sides and the top of the primary/client pair, with the 0 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

Charging Mode 2 Charging Mode with iPhone x 10% Charger (distance 0 cm)

E-Field Measurement					
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-Field(V/m)	8.45	7.04	12.4	8.31	11.35
Limit(V/m)	614	614	614	614	614
Margin (V/m)	-605.55	-606.96	-601.6	-605.69	-602.65
50% Limit (V/m)	307	307	307	307	307
50% Margin (V/m)	-298.55	-299.96	-294.6	-298.69	-295.65

H-Field Measurement					
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-Field(uT)	0.28	0.3	0.83	0.96	0.67
Max H-Field(A/m)	0.223	0.239	0.661	0.764	0.533
Limit(A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.407	-1.391	-0.969	-0.866	-1.097
50% Limit (A/m)	0.815	0.815	0.815	0.815	0.815
50% Margin (A/m)	-0.592	-0.576	-0.154	-0.051	-0.282

Measurements was made from all sides and the top of the primary/client pair, with the 0 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

Charging Mode 3 Charging Mode with iPhone x 10% Charger (distance 2 cm)

E-Field Measurement					
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-Field(V/m)	5.09	5.35	8.35	7.56	9.11
Limit(V/m)	614	614	614	614	614
Margin (V/m)	-608.91	-608.65	-605.65	-606.44	-604.89
50% Limit (V/m)	307	307	307	307	307
50% Margin (V/m)	-301.91	-301.65	-298.65	-299.44	-297.89

H-Field Measurement					
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-Field(uT)	0.228	0.25	0.42	0.76	0.54
Max H-Field(A/m)	0.182	0.199	0.334	0.605	0.430
Limit(A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.448	-1.431	-1.296	-1.025	-1.200
50% Limit (A/m)	0.815	0.815	0.815	0.815	0.815
50% Margin (A/m)	-0.633	-0.616	-0.481	-0.210	-0.385

Measurements was made from all sides and the top of the primary/client pair, with the 2 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

Charging Mode 4 Charging Mode with iPhone x 10% Charger (distance 4 cm)

E-Field Measurement					
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-Field(V/m)	3.87	3.17	7.36	4.45	5.94
Limit(V/m)	614	614	614	614	614
Margin (V/m)	-610.13	-610.83	-606.64	-609.55	-608.06
50% Limit (V/m)	307	307	307	307	307
50% Margin (V/m)	-303.13	-303.83	-299.64	-302.55	-301.06

H-Field Measurement					
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-Field(uT)	0.229	0.23	0.42	0.37	0.46
Max H-Field(A/m)	0.182	0.183	0.334	0.295	0.366
Limit(A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.448	-1.447	-1.296	-1.335	-1.264
50% Limit (A/m)	0.815	0.815	0.815	0.815	0.815
50% Margin (A/m)	-0.633	-0.632	-0.481	-0.520	-0.449

Measurements was made from all sides and the top of the primary/client pair, with the 4 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

Charging Mode 5 Charging Mode with iPhone x 10% Charger (distance 6 cm)

E-Field Measurement					
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-Field(V/m)	2.05	1.83	2.14	3.77	2.35
Limit(V/m)	614	614	614	614	614
Margin (V/m)	-611.95	-612.17	-611.86	-610.23	-611.65
50% Limit (V/m)	307	307	307	307	307
50% Margin (V/m)	-304.95	-305.17	-304.86	-303.23	-304.65

H-Field Measurement					
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-Field(uT)	0.228	0.229	0.32	0.35	0.32
Max H-Field(A/m)	0.182	0.182	0.255	0.279	0.255
Limit(A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.448	-1.448	-1.375	-1.351	-1.375
50% Limit (A/m)	0.815	0.815	0.815	0.815	0.815
50% Margin (A/m)	-0.633	-0.633	-0.560	-0.536	-0.560

Measurements was made from all sides and the top of the primary/client pair, with the 6 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

Charging Mode 6 Charging Mode with iPhone x 10% Charger (distance 8 cm)

E-Field Measurement					
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-Field(V/m)	2.89	2.63	2.96	2.32	3.08
Limit(V/m)	614	614	614	614	614
Margin (V/m)	-611.11	-611.37	-611.04	-611.68	-610.92
50% Limit (V/m)	307	307	307	307	307
50% Margin (V/m)	-304.11	-304.37	-304.04	-304.68	-303.92

H-Field Measurement					
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-Field(uT)	0.228	0.229	0.289	0.28	0.38
Max H-Field(A/m)	0.182	0.182	0.230	0.223	0.303
Limit(A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.448	-1.448	-1.400	-1.407	-1.327
50% Limit (A/m)	0.815	0.815	0.815	0.815	0.815
50% Margin (A/m)	-0.633	-0.633	-0.585	-0.592	-0.512

Measurements was made from all sides and the top of the primary/client pair, with the 8 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

Charging Mode 7 Charging Mode with iPhone x 10% Charger (distance 10 cm)

E-Field Measurement					
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-field (V/m)	1.36	1.14	1.93	2.25	1.83
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-612.64	-612.86	-612.07	-611.75	-612.17
50% Limit (V/m)	307	307	307	307	307
50% Margin (V/m)	-305.64	-305.86	-305.07	-304.75	-305.17

H-Field Measurement					
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-field (uT)	0.229	0.23	0.231	0.234	0.232
Max H-field (A/m)	0.182	0.183	0.184	0.186	0.185
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.448	-1.447	-1.446	-1.444	-1.445
50% Limit (A/m)	0.815	0.815	0.815	0.815	0.815
50% Margin (A/m)	-0.633	-0.632	-0.631	-0.629	-0.630

Measurements was made from all sides and the top of the primary/client pair, with the 10 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

Charging Mode 8 Charging Mode with iPhone x 50% Charger (distance 0 cm)

E-Field Measurement					
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-field (V/m)	7.56	7.23	11.32	7.34	12.34
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-606.44	-606.77	-602.68	-606.66	-601.66
50% Limit (V/m)	307	307	307	307	307
50% Margin (V/m)	-299.44	-299.77	-295.68	-299.66	-294.66

H-Field Measurement					
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-field (uT)	0.263	0.286	0.763	0.904	0.563
Max H-field (A/m)	0.209	0.228	0.607	0.720	0.448
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.421	-1.402	-1.023	-0.910	-1.182
50% Limit (A/m)	0.815	0.815	0.815	0.815	0.815
50% Margin (A/m)	-0.606	-0.587	-0.208	-0.095	-0.367

Measurements was made from all sides and the top of the primary/client pair, with the 0 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

Charging Mode 9 Charging Mode with iPhone x 90% Charger (distance 0 cm)

E-Field Measurement					
EUT Side	Left	Right	Top	Bottom	Z-axis
Max E-field (V/m)	7.92	6.22	11.64	7.93	11.05
Limit (V/m)	614	614	614	614	614
Margin (V/m)	-606.08	-607.78	-602.36	-606.07	-602.95
50% Limit (V/m)	307	307	307	307	307
50% Margin (V/m)	-299.08	-300.78	-295.36	-299.07	-295.95

H-Field Measurement					
EUT Side	Left	Right	Top	Bottom	Z-axis
Max H-field (uT)	0.249	0.286	0.783	0.867	0.637
Max H-field (A/m)	0.198	0.228	0.623	0.690	0.507
Limit (A/m)	1.63	1.63	1.63	1.63	1.63
Margin (A/m)	-1.432	-1.402	-1.007	-0.940	-1.123
50% Limit (A/m)	0.815	0.815	0.815	0.815	0.815
50% Margin (A/m)	-0.617	-0.587	-0.192	-0.125	-0.308

Measurements was made from all sides and the top of the primary/client pair, with the 0 cm measured from the center of the probe(s) to the edge of the device. The highest emission level was recorded.

3. PHOTOGRAPHS OF THE TEST CONFIGURATION

Please refer to the attached file (FCC MPE Test Photo).

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