



FCC RF EXPOSURE REPORT

For

UL Listed 10000 mAh Fast Wireless Power Bank Stand Kit

MODEL NUMBER: MSL-W184Q

FCC ID: 2AN8FMSL-W184Q

REPORT NUMBER: 4789185994.1-3

ISSUE DATE: November 21, 2019

Prepared for

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Prepared by

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Revision History

Rev.	Issue Date	Revisions	Revised By
V0	11/21/2019	Initial Issue	



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1. ATTESTATION OF TEST RESULTS

Applicant Information

Company Name: ShenZhen Mossloo Industrial CO., Ltd.
Address: Rd One No.4 Science Industrial Park Shangxue Village Bantian
St Longgang District Shenzhen Guangdong

Manufacturer Information

Company Name: ShenZhen Mossloo Industrial CO., Ltd.
Address: Rd One No.4 Science Industrial Park Shangxue Village Bantian
St Longgang District Shenzhen Guangdong

EUT Description

EUT Name: UL Listed 10000 mAh Fast Wireless Power Bank Stand Kit
Model: MSL-W184Q
Brand Name: MSL
Sample Status: Normal
Sample ID: 2581812
Sample Received Date: September 26, 2019
Date of Tested: September 27, 2019 ~ November 21, 2019

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC 47CFR§1.1307	PASS
FCC 47CFR§1.1310	PASS
FCC 47CFR§2.1093	PASS
FCC 47CFR§2.1091	PASS

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2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with FCC 47CFR§1.1307(b)(1), FCC 47CFR§1.1310, FCC 47CFR§2.1093, 680106 D01 RF Exposure wireless charging apps v03.

3. FACILITIES AND ACCREDITATION

Accreditation Certificate	<p>A2LA (Certificate No.: 4102.01) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with A2LA.</p> <p>FCC (FCC Designation No.: CN1187) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. Has been recognized to perform compliance testing on equipment subject to the Commission's Declaration of Conformity (DoC) and Certification rules</p> <p>IC (Company No.: 21320) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been registered and fully described in a report filed with Industry Canada. The Company Number is 21320.</p> <p>VCCI (Registration No.: G-20019, R-20004, C-20012 and T-20011) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with VCCI, the Membership No. is 3793. Facility Name: Chamber D, the VCCI registration No. is G-20019 and R-20004 Shielding Room B, the VCCI registration No. is C-20012 and T-20011</p>
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Note: All tests measurement facilities use to collect the measurement data are located at Building 10, Innovation Technology Park, Song Shan Lake Hi tech Development Zone, Dongguan, 523808, China

4. REQUIREMENT

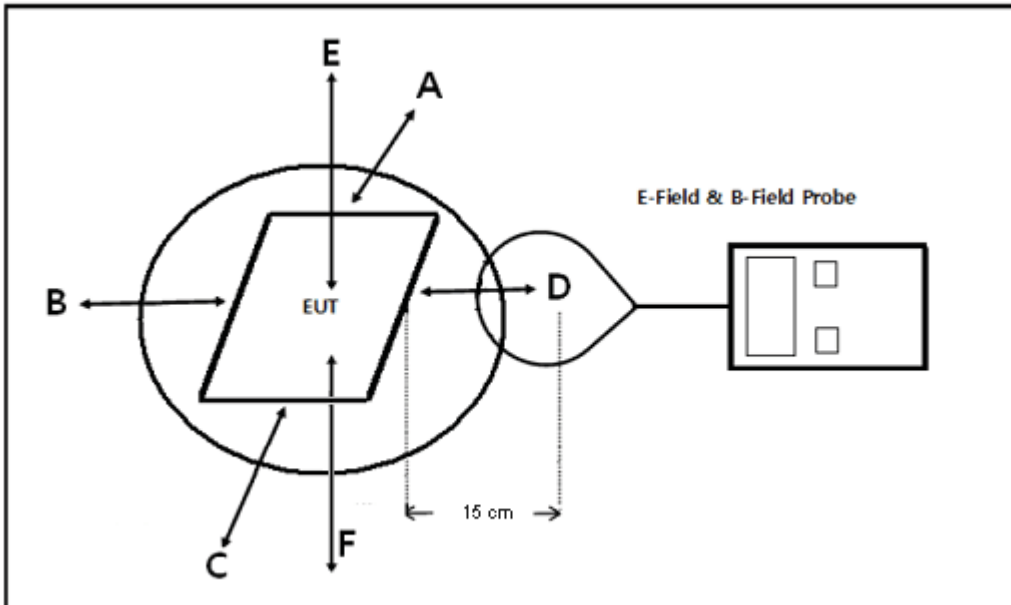
RF EXPOSURE LIMIT

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

METHOD OF MEASUREMENT

- The RF exposure test was performed in shielded chamber.
- The measurement probe was placed at test distance (15cm) which is between the edge of the charger and the geometric centre of probe.
- 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 680106D01v03.

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.

**EQUIPMENT APPROVAL CONSIDERATIONS**

The EUT does comply with KDB 680106D01v03.

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 10 watts.

3) The transfer system includes only single primary and secondary coils. This includes charging systems that may have multiple primary coils and clients that are able to detect and allow coupling only between individual pairs of coils.

No, the transmitter includes two coils, but the coils and circuit before antenna are the same, only one coil can be active at one time.

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; The EUT is a mobile 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.

The EUT field strength levels are bigger than 50% of the MPE limit.

MEASURING INSTRUMENT USED

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due. Date
Electric and Magnetic Field Analyzer	Narda	EHP-200A	170WX90204	April 21, 2019	April 21, 2020

**H FIELD STRENGTH**

Test mode for wireless charger:

Mode	Description
Mode 1	Power Bank charging by charging base and with 5W wireless charging load
Mode 2	Power Bank charging by type-C (5V/2A) and with 5W wireless charging load
Mode 3	Power Bank charging by type-C (9V/2A) and with 5W wireless charging load
Mode 4	Power Bank with USB A 5V/2.4A load and 5W wireless charging load
Mode 5	Power Bank with 7.5W wireless charging load
Mode 6	Power Bank with 10W wireless charging load

Note 1: Because the coils and circuit before antenna are the same, Coil 1, Coil 2 and Coil 1+Coil 2 (Only one coil can be activated) modes had been conducted pre-scanned to determine the worst-case mode from both coils, but only the worst data were recorded in this report.

Note 2: The wireless charging function only support 5W output but USB A port can't work when the power bank was under charged.

Note 3: The wireless charging function only support 5W output when the USB A port discharging.

Note 4: When the wireless charging output is more than 7.5W, the USB A output port can't work normally.



H-Filed Strength at 15 cm from the edges surrounding the EUT and 20cm above the top surface of the EUT (A/m)

Test Position	H-Filed Strength Measure Result		Limits (A/m)
	Mode 4		
	A/m		
A	0.0508		1.63
B	0.0511		1.63
C	0.0566		1.63
D	0.0542		1.63
E	0.0521		1.63
F	0.0683		1.63

Test Position	H-Filed Strength Measure Result		Limits (A/m)
	Mode 5		
	A/m		
A	0.0855		1.63
B	0.0871		1.63
C	0.1023		1.63
D	0.0906		1.63
E	0.0965		1.63
F	0.1116		1.63

Test Position	H-Filed Strength Measure Result		Limits (A/m)
	Mode 6		
	A/m		
A	0.5171		1.63
B	0.6518		1.63
C	0.4125		1.63
D	0.6941		1.63
E	0.3518		1.63
F	0.7066		1.63

Note: All the mode had been tested, but only the worst data recorded in the report.



E-Filed Strength at 15 cm from the edges surrounding the EUT and 20cm above the top surface of the EUT (V/m)

Test Position	E-Filed Strength Measure Result		Limits (V/m)
	Mode 4		
	V/m		
A	0.4175		614
B	0.4022		614
C	0.4321		614
D	0.4236		614
E	0.4031		614
F	0.4354		614

Test Position	E-Filed Strength Measure Result		Limits (V/m)
	Mode 5		
	V/m		
A	1.6311		614
B	1.2205		614
C	1.5978		614
D	1.2765		614
E	1.0804		614
F	1.6845		614

Test Position	E-Filed Strength Measure Result		Limits (V/m)
	Mode 6		
	V/m		
A	1.6563		614
B	1.7137		614
C	1.7316		614
D	1.5645		614
E	1.8699		614
F	1.7544		614

Note: All the mode had been tested, but only the worst data recorded in the report.

END OF REPORT