



RF EXPOSURE REPORT

FOR

Wireless Charger

MODEL NUMBER: RWC826USB

REPORT NUMBER: R11447116-E1

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Prepared for
Pass & Seymour
50 Boyd Avenue
Syracuse, NY 13209 USA

Prepared by
UL LLC
12 LABORATORY DR.
RESEARCH TRIANGLE PARK, NC 27709 USA
TEL: (919) 549-1400

Revision History

Ver.	Issue Date	Revisions	Revised By
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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: Pass & Seymour
50 Boyd Avenue
Syracuse, NY 13209 USA

EUT DESCRIPTION: Qi Wireless Charger

MODEL: RWC826USB

SERIAL NUMBER: Sample # 11

DATE TESTED: 2017-03-06 – 2017-03-07

UL LLC measured the RF Exposure of the above equipment in accordance with the requirements set forth in the above standards, using test results reported in the test report documents referenced below and/or documentation furnished by the applicant. All indications of Pass/Fail in this report are opinions expressed by UL LLC based on interpretations of these calculations. The results show that the equipment is capable of demonstrating compliance with the requirements as documented in this report.

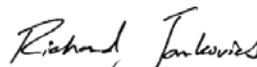
Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL LLC and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL LLC will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the US Government.

Approved & Released
For UL LLC By:

Prepared By:



Jeff Moser
EMC Program Manager
UL – Consumer Technology Division



Richard Jankovics
WiSE Engineer
UL – Consumer Technology Division

2. TEST METHODOLOGY

All measurements were made in accordance to par. 3 of KDB 680106 D01 v02 RF Exposure Wireless Charging Applications.

3. REFERENCES

All measurements were made as documented in this test report UL LLC

4. FACILITIES

The test sites and measurement facilities used to collect data are located at 12 Laboratory Dr., Research Triangle Park, NC 27709, USA and 2800 Suite B, Perimeter Park Drive, Morrisville, NC 27560.

12 Laboratory Dr., RTP, NC 27709
☐ Chamber A
☐ Chamber C

2800 Suite B Perimeter Park Dr., Morrisville, NC 27560
☒ Chamber NORTH
☒ Chamber SOUTH

5. CALIBRATION AND UNCERTAINTY

5.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

5.2. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

Test	Equipment	Uncertainty k=2
Magnetic Field	Exposure Level Meter	+/- 1.1 dB
Electric Field	RF Field Probe	+/- 1.0 dB

Uncertainty figures are valid to a confidence level of 95%.

6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

Test Equipment List					
Description	Manufacturer	Model	Eqp. No.	Cal Date	Cal Due
RF Field Probe	Holiday	HI-4422	AT0009	2016-06-20	2017-06-30
Exposure Level Meter	Narda	ELT-400	34950	2016-08-02	2017-08-31

7. EQUIPMENT UNDER TEST

7.1. DESCRIPTION OF EUT

The EUT is a Wireless Qi Charger with dual identical charging coils (used for alignment, only one coil active at a time), one USB 5V output (maximum 0.5 A), and a dual 120V outlet. Device is installed in a standard wall-mount orientation for testing.

GENERAL INFORMATION

Power Requirements	120V/60Hz
Frequency Range used for Charging	0.110-0.205MHz

SUPPORT EQUIPMENT & PERIPHERALS

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
Qi Client	Samsung	SM-G930U (Galaxy S7)	R58HA07593X	A3LSMG930US

I/O CABLES

I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	AC Input	1	Screw terminal	3-wire	1	None.

7.1. SOFTWARE AND FIRMWARE

Firmware installed on sample: Rev 0.9.

7.2. WORST-CASE CONFIGURATION AND MODE

E AND H Field measurements were performed at a distance of 10cm laterally from the edges of the EUT.

The following modes were investigated with the Qi charger under the following conditions:

- Qi client at 0%-charge state.
- Qi client at 50% charge state.
- Qi client at 100% charge state.
- Standby (No Qi client on charging pad.)

7.3. MODIFICATIONS

No modifications were made during testing.

8. MAXIMUM PERMISSIBLE RF EXPOSURE

8.1. FCC RULES

§1.1310 The criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio-frequency (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)
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*100	30

f = frequency in MHz

* = Plane-wave equivalent power density

9. RF EXPOSURE RESULTS

Electric Field Strength and Magnetic Field Strength

Test Operator: Mark Nolting				Date: 2017-03-06			
Exposure with Qi Client at 0% charge							
Position	Lateral Distance from EUT (cm)	Electric Field Strength (V/m)	FCC Limit (V/m)	Magnetic Field Strength (uT)	Magnetic Field Strength (A/m)	FCC Limit (A/m)	IC Limit (A/m)
Top	10	2.58	614	0.159	0.13	1.63	3.56
Left	10	1.64	614	0.063	0.05	1.63	3.56
Right	10	2.46	614	0.123	0.10	1.63	3.56
Front	10	3.79	614	0.197	0.16	1.63	3.56
Back	10	5.29	614	0.586	0.47	1.63	3.56
Bottom	10	2.59	614	0.109	0.09	1.63	3.56
Exposure in Standby (No Qi client on charging pad.)							
Position	Lateral Distance from EUT (cm)	Electric Field Strength (V/m)	FCC Limit (V/m)	Magnetic Field Strength (uT)	Magnetic Field Strength (A/m)	FCC Limit (A/m)	IC Limit (A/m)
Top	10	2.42	614	0.141	0.11	1.63	3.56
Left	10	1.62	614	0.044	0.03	1.63	3.56
Right	10	1.53	614	0.087	0.07	1.63	3.56
Front	10	2.71	614	0.605	0.48	1.63	3.56
Back	10	2.79	614	0.355	0.28	1.63	3.56
Bottom	10	1.75	614	0.072	0.06	1.63	3.56

Test Operator: Mark Nolting				Date: 2017-03-07			
Exposure with Qi Client at 50% charge							
Position	Lateral Distance from EUT (cm)	Electric Field Strength (V/m)	FCC Limit (V/m)	Magnetic Field Strength (uT)	Magnetic Field Strength (A/m)	FCC Limit (A/m)	IC Limit (A/m)
Top	10	2.86	614	0.170	0.14	1.63	3.56
Left	10	1.36	614	0.062	0.05	1.63	3.56
Right	10	2.49	614	0.170	0.14	1.63	3.56
Front	10	3.79	614	0.208	0.17	1.63	3.56
Back	10	5.54	614	0.607	0.48	1.63	3.56
Bottom	10	2.37	614	0.126	0.10	1.63	3.56
Exposure with Qi Client at 100% charge							
Position	Lateral Distance from EUT (cm)	Electric Field Strength (V/m)	FCC Limit (V/m)	Magnetic Field Strength (uT)	Magnetic Field Strength (A/m)	FCC Limit (A/m)	IC Limit (A/m)
Top	10	1.54	614	0.043	0.03	1.63	3.56
Left	10	1.47	614	0.036	0.03	1.63	3.56
Right	10	1.24	614	0.039	0.03	1.63	3.56
Front	10	2.59	614	0.046	0.04	1.63	3.56
Back	10	3.92	614	0.097	0.08	1.63	3.56
Bottom	10	1.90	614	0.039	0.03	1.63	3.56