



RF Exposure

Project #:	G102731932	Test Area:	Intertek Louisville
Test Method:	FCC CFR47 Part 1.1310	Test Date:	10/4/2016
EUT Model #:	Power Pack	FCC ID:	SXO-PP01
EUT Serial #:	EMC		
Manufacturer:	Sphero Inc,		
Notes:			

Requirements

According to KDB680106 D01 RF Exposure Wireless Charging Apps v02 (05/31/2013), the requirement of RF exposure for the Wireless Charging device shall be as follows.

The RF exposure requirements must be determined in conjunction with the device operating characteristics, according to the mobile and portable exposure requirements in Section 2.1091 and Section 2.1093 of the rules. SAR and MPE limits do not cover the frequency range for wireless power transfer applications which operate below 100 kHz and 300 kHz respectively; therefore, RF exposure compliance needs to be determined with respect to 1.1307 (c) and (d) of the FCC rules.

For devices designed for typical desktop applications, such a wireless charging pads, RF exposure evaluation should be conducted assuming a user separation distance of 10 cm. E and H field strength measurements or numerical modeling may be used to demonstrate compliance. Measurements should be 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. Emissions between 100 kHz to 300 kHz should be assessed versus the limits at 300 kHz in Table 1 of Section 1.1310: 614 V/m and 1.63 A/m.

Test Data

Fundament Frequency = 125kHz

Magnetic Field

Measurement Point	Measurement Distance (cm)	Limit (A/m)	30% of Limit (A/m)	Measured Value (μT)	Convert (A/m)	Margin 30% Limit (A/m)
Ambient				0.037	0.030	
Front	10	1.63	0.489	0.273	0.218	-0.271
Back	10	1.63	0.489	0.190	0.152	-0.337
Left	10	1.63	0.489	0.255	0.204	-0.285
Right	10	1.63	0.489	0.150	0.120	-0.369
Top	10	1.63	0.489	0.407	0.326	-0.163
Top (Lid Closed)	10	1.63	0.489	0.294	0.235	-0.254

Conversion μT to A/m

A/m = μT/1.25

Electric Field

Measurement Point	Measurement Distance (cm)	Limit (V/m)	30% of Limit (V/m)	Measured Value (V/m)	Margin 30% Limit (V/m)
Front	10	614	184.2	1.56	-182.64
Back	10	614	184.2	2.32	-181.88
Left	10	614	184.2	2.12	-182.08
Right	10	614	184.2	1.32	-182.88
Top	10	614	184.2	5.27	-178.93
Top (Lid Closed)	10	614	184.2	2.75	-181.45

Test Equipment Used

Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due
DEN-044	ELT-400 Exposure Level Tester	NARDA	2304/03	M-0356	8/23/2016	8/23/2017
51-2029784	Tape Measure	Stanley	5m	N/A	12/10/2015	12/10/2016
18707	RF Electric Field Probe	Amplifier Research	FP5000	20134	8/23/2016	8/23/2017
260	Humidity/Temperature Pen	Extech	445580	445580	7/21/2016	7/21/2017