WPT Evaluation Report

FCC ID	:	**A4RGVU6C**
Equipment	:	**Phone**
Applicant	:	**Google LLC** **1600 Amphitheatre Parkway,** **Mountain View, California, 94043 USA**
Standard	:	**FCC CFR 47 part 1, 1.1307 and 1.1310** **KDB 680106 D01v03**

We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample provide by manufacturer and the test data has been evaluated in accordance with the test procedures given in 47 CFR part 1, 1.1307, 1.1310 and FCC KDB and has been pass the FCC requirement.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.

Approved by: Cona Huang / Deputy Manager

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory

No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan

Table of Contents

1. DESCRIPTION OF EQUIPMENT UNDER TEST (EUT) 4
2. RF EXPOSURE LIMIT INTRODUCTION 4
3. TEST MODE 5
4. MEASUREMENT EQUIPMENT 5
5. RF EXPOSURE EVALUATION 5
Appendix A. Test Setup Photo

Revision History

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA1O2843-06B	Rev. 01	Initial issue of report	Jun. 15, 2022

1. Description of Equipment Under Test (EUT)

Product Feature & Specification	
EUT Type	Phone
FCC ID	A4RGVU6C
Frequency Range	110KHz ~ 148.5KHz
Moudlation Type	ASK
Antenna Type	Coil
Date of Test	Apr. 26, 2022

2. RF Exposure Limit Introduction

§ 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.

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 Exposure				
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
300-1,500			f/300	6
1,500-100,000			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
300-1,500			f/1500	30
1,500-100,000			1.0	30

f = frequency in MHz

* = Plane-wave equivalent power density

(1) Occupational/controlled exposure 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 a person is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure. The phrase fully aware in the context of applying these exposure limits means that an exposed person has received written and/or verbal information fully explaining the potential for RF exposure resulting from his or her employment. With the exception of transient persons, this phrase also means that an exposed person has received appropriate training regarding work practices relating to controlling or mitigating his or her exposure. Such training is not required for transient persons, but they must receive written and/or verbal information and notification (for example, using signs) concerning their exposure potential and appropriate means available to mitigate their exposure. The phrase exercise control means that an exposed person is allowed to and knows how to reduce or avoid exposure by administrative or engineering controls and work practices, such as use of personal protective equipment or time averaging of exposure.

(2) General population/uncontrolled exposure limits apply in situations in which the general public may be exposed, or in which persons who are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

3. Test Mode

This device has been tested in the following charging conditions as below:

Test Mode	Test Setup Configuration	Charging Current Condition
TM1	Test w/ Client Device installed	< 1% Battery status
TM2	Test w/ Client Device installed	50% Battery status
TM3	Test w/ Client Device installed	Near 100% Battery status

4. Measurement Equipment

Instrument	Manufacturer	Model No.	Serial No.	Freq. Range	Last Cal.	Due Date
Electric and Magnetic field Probe-Analyzey	Narda S.T.S / PMM	EHP 200AC	170WX80309	3KHz~30MHz	Oct. 26, 2021	Oct. 25, 2022

5. RF Exposure Evaluation

General Note:

1. The device support Wireless Power Consortium with a maximum power transfer to the phone of 5W. In addition, the device can be used in reverse, as a transmitter to another wireless charging receiver. In this case, up to 5W (BPP) can be transmitted to the external receiver.
2. For portable devices that do not physically attach to phone, desktop WPT testing guidance from FCC KDB 680106 D01v03r01.
3. There is no mechanical / magnetic connection mechanism between client and smart phone (this application) so charging is only supported for desktop/tabletop use.
4. The equipment under test was placed on a desk inside of shield room. The isotropic field probe was used to measure the field strength for 6 EUT surfaces, the detail setup photo please refer to Appendix A.
5. Per KDB 680106 D01v03r01, RF exposure evaluation at 15 cm surrounding the device and 20 cm above the top surface. Emissions between 50 kHz to 300 kHz should be assessed versus the limits at 300 kHz in Table 1 of Section 1.1310: 1.63 A/m and aggregate H-field strengths from all simultaneous transmitting coils are demonstrated to be less than 50% of the MPE limit

Position	H-Field Measurement (A/m)						
	A (20cm)	B (20cm)	C (15cm)	D (15cm)	E (15cm)	F (15cm)	50% of limit
TM1	0.0141	0.0140	0.0146	**0.0152**	0.0142	0.0141	0.815
TM2	0.0139	0.0140	0.0143	0.0144	0.0140	0.0141	
TM3	0.0141	0.0138	0.0133	0.0146	0.0134	0.0142	

Conclusion:

The field strength limit refers to Part 1.1310 and the test result of exposure evaluation is compliant with 50% of the MPE limit. (H-field: 0.815A/m).