WPT Evaluation Report

FCC ID	:	**A4RG8V0U**
Equipment	:	**Phone**
Model Name	:	**G8V0U, GF5KQ**
Applicant	:	**Google LLC** **1600 Amphitheatre Parkway,** **Mountain View, California, 94043 USA**
Standard	:	**FCC CFR 47 part 1, 1.1307(b) 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(b), 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.

Cona Huang

Approved by: Cona Huang / Deputy Manager

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Table of Contents

Revision History

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA121931-04B	Rev. 01	Initial issue of report	Aug. 15, 2021

1. Description of Equipment Under Test (EUT)

Product Feature & Specification	
EUT Type	Phone
Model Name	G8V0U, GF5KQ
FCC ID	A4RG8V0U
Frequency Range	110KHz ~ 148.5KHz
Moudlation Type	ASK
Antenna Type	Loop
Date of Test	Jul. 20, 2021

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 Rang	Last Cal.	Due Date
Electric and Magnetic field Probe-Analyzey	Narda S.T.S / PMM	EHP 200AC	170WX80309	3KHz~30MHz	Sep. 12, 2020	Sep. 11, 2021

5. RF Exposure Evaluation

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 (Baseline Power Profile) can be transmitted to the external receiver.
2. According to 201910 TCBC workshop, 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 wooden 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 20cm 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.
6.

Position	H-Field Measurement (A/m)						
	A (20cm)	B (20cm)	C (15cm)	D (15cm)	E (15cm)	F (15cm)	50% of limit
TM1	0.0629	0.0513	0.0578	0.0588	0.0555	0.0557	0.815
TM2	0.0605	0.0499	0.0572	0.0575	0.0543	0.0538	
TM3	0.0612	0.0495	0.0565	0.0561	0.0537	0.0534	

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).