

# WPT Evaluation Report

FCC ID : 2AFZZK2G  
Brand Name : Xiaomi  
Equipment : Mobile Phone  
Model Name : M2011K2G  
Applicant : Xiaomi Communications Co., Ltd.  
#019, 9TH FLOOR, BUILDING 6, 33  
XI'ERQI MIDDLE ROAD, HAIDIAN  
DISTRICT, BEIJING, CHINA, 100085  
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.



Approved by: Cona Huang / Deputy Manager



**Sporton International Inc.**

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



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**Revision History**

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA0N0303	Rev. 01	Initial issue of report	Dec. 17, 2020

**1. Description of Equipment Under Test (EUT)**

Product Feature & Specification	
EUT Type	Mobile Phone
Brand Name	Xiaomi
Model Name	M2011K2G
FCC ID	2AFZZK2G
IMEI Code	868285059998904 868285059998912 868285059998920 868285059998938
Frequency Range	WPT: 110~148 kHz
Modulation Type	WPT: ASK
Date of Test	Nov. 30, 2020

**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 <sup>2</sup> )	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 <sup>2</sup>	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 <sup>2</sup>	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-Analyzer	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 (WPC or commonly referred to as Qi) standard EPP (Extended Power Profile) as a receiver, with a maximum power transfer of 15W to the phone. It also supports the WPC standard Basic Power Profile (BPP) as a receiver, 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. According to 202010 TCBC workshop, for portable devices that do not physically attach to phone, desktop WPT testing guidance from FCC KDB 680106 D01v03 is applied.
3. Per KDB 680106 D01v03 and 202010 TCBC workshop, 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.
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.

Position	H-Field Measurement (A/m)						Limit (A/m)
	A (15cm)	B (15cm)	C (15cm)	D (15cm)	E (20cm)	F (20cm)	
TM1	0.0273	0.0333	0.0329	0.0280	0.0159	0.0169	1.63
TM2	0.0269	0.0321	0.0324	0.0271	0.0148	0.0163	
TM3	0.0271	0.0328	0.0326	0.0268	0.0151	0.0167	

### **Conclusion:**

The field strength limit refers to Part 1.1310 and the test result of exposure evaluation is compliant.