ElectroMagnetic Field(EMF) Radiation Exposure TEST REPORT

No. B23Z60388-SEM01

For

ZIMI CORPORATION

Xiaomi 50W Wireless Car Charger

Model Name: WCJ05ZM

with

Hardware Version: WCJ05_MB

Software Version: V15

FCC ID: 2AMIN-WCJ05ZM

Issued Date: 2023-4-10

Note:

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of CTTL.

Test Laboratory:

CTTL, Telecommunication Technology Labs, CAICT

No. 52, Huayuan North Road, Haidian District, Beijing, P. R. China 100191.

Tel:+86(0)10-62304633-2512, Fax:+86(0)10-62304633-2504

Email: cttl_terminals@caict.ac.cn, website: www.caict.ac.cn

REPORT HISTORY

Report Number	Revision	Issue Date	Description
B23Z60388-SEM01	Rev.0	2023-4-10	Initial creation of test report

TABLE OF CONTENT

1 Test Laboratory

1.1 Testing Location

Company Name:	CTTL
Address:	No. 52, Huayuan North Road, Haidian District, Beijing, P. R. China 100191.

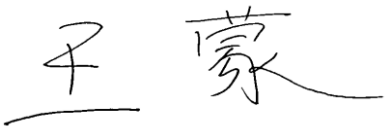
1.2 Testing Environment

Temperature:	Min. = 18°C, Max. = 25°C
Relative humidity:	Min. = 30%, Max. = 70%
Ground system resistance:	< 0.5 Ω
Ambient noise & Reflection:	< 0.012 W/kg

1.3 Project Data

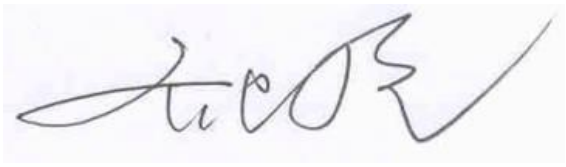
Project Leader:	Qi Dianyuan
Test Engineer:	Wang Meng
Testing Start Date:	March 31, 2023
Testing End Date:	March 31, 2023

1.4 Signature



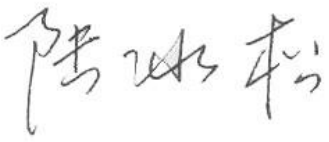
Wang Meng

(Prepared this test report)



Qi Dianyuan

(Reviewed this test report)



Lu Bingsong

Deputy Director of the laboratory

(Approved this test report)

2 Statement of Compliance

According to 'KDB680106 D01 RF Exposure Wireless Charging App v03r01'，for mobile WPT equipment, its H-field needs to be measured at 15 cm and is limited to 1.63A/m. the measured value at 14cm is 0.52.

3 Client Information

3.1 Applicant Information

Company Name:	ZIMI CORPORATION
Address/Post:	Room A913, No.159 Chengjiang Road, Jiangyin City, Jiangsu Province, 214431, P.R.C
Contact Person:	/
Contact Email:	/
Telephone:	/
Fax	/

3.2 Manufacturer Information

Company Name:	ZIMI CORPORATION
Address/Post:	Room A913, No.159 Chengjiang Road, Jiangyin City, Jiangsu Province, 214431, P.R.C
Contact Person:	/
Contact Email:	/
Telephone:	/
Fax	/

4 Equipment Under Test (EUT) and Ancillary Equipment (AE)

4.1 About EUT

Description:	Xiaomi 50W Wireless Car Charger
Model Name:	WCJ05ZM
Tested mode:	Wireless Charging
Operating Frequency:	115–148 kHz
Test device Production information:	Production unit
Antenna type:	Inductive Loop Coil Antenna

4.2 Internal Identification of EUT used during the test

EUT ID*	IMEI	HW Version	SW Version
EUT1	/	WCJ05_MB	V15

*EUT ID: is used to identify the test sample in the lab internally.

Note: It is performed to test E-field strength with the EUT1.

5 TEST METHODOLOGY

5.1 Applicable Measurement Standards

KDB 680106 D01 RF Exposure Wireless Charging Apps v03r01
TCB Workshop April 2022: Part 18 & Wireless Power Transfer

5.2 RF Exposure Requirements

For equipment authorization of RF devices operating between 100 kHz and 4 MHz, the use of MPE limits in 47 CFR § 1.1310 (with the 300 kHz limit applicable all the way down to 100 kHz) for both E- and H- field strength is allowed in lieu of SAR.
For loop/coil emitting structures (dominant H-field near-field emission), only H-field measurements are acceptable for MPE limit compliance
According to 'KDB680106 D01 RF Exposure Wireless Charging App v03r01'，for mobile WPT equipment, its H-field needs to be measured at 15 cm and is limited to 1.63A/m.

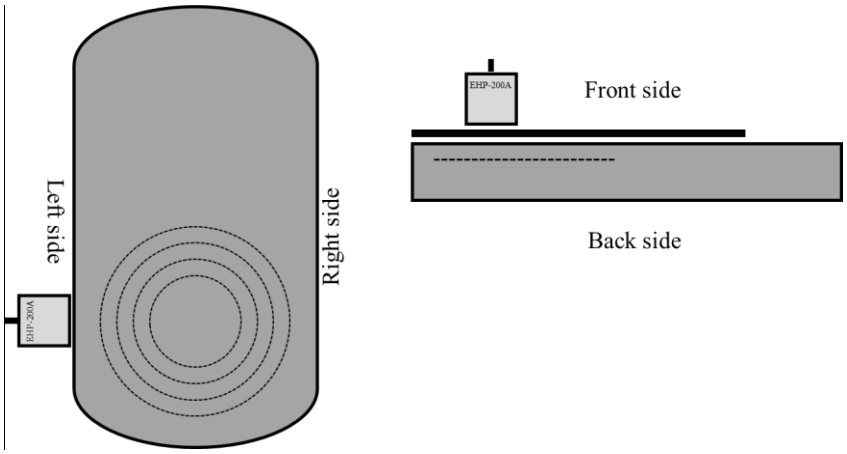
Table 1 to § 1.1310(e)(1) - Limits for Maximum Permissible Exposure (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
(i) 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
(ii) 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.

6 Test Setup

E- and H-field data are taken along all three axes the device, from 0 cm to 20 cm, in 2 cm minimum increment measured from the edge of the device, with one axis coincident with the axis of the main coil.



7 H-field strength Test Results

Position	Distance (cm)	Tx Power (W)	H-field (A/m)
Front Side	0	50	59.19
Front Side	2	50	22.95
Front Side	4	50	9.01
Front Side	6	50	4.79
Front Side	8	50	2.50
Front Side	10	50	1.00
Front Side	12	50	0.64
Front Side	14	50	0.50
Front Side	16	50	0.31
Front Side	18	50	0.28
Back Side	0	50	7.92
Back Side	2	50	6.08
Back Side	4	50	4.24
Back Side	6	50	2.29
Back Side	8	50	1.20
Back Side	10	50	0.89
Back Side	12	50	0.65
Back Side	14	50	0.52
Back Side	16	50	0.29
Back Side	18	50	0.24
Left Side	0	50	9.38
Left Side	2	50	3.02
Left Side	4	50	1.69
Left Side	6	50	1.07
Left Side	8	50	0.56
Left Side	10	50	0.41
Left Side	12	50	0.30
Left Side	14	50	0.24
Left Side	16	50	0.14
Left Side	18	50	0.11
Right Side	0	50	7.15
Right Side	2	50	3.07
Right Side	4	50	1.55
Right Side	6	50	0.96
Right Side	8	50	0.69
Right Side	10	50	0.40
Right Side	12	50	0.38
Right Side	14	50	0.31
Right Side	16	50	0.22
Right Side	18	50	0.20
Bottom Side	0	50	13.39
Bottom Side	2	50	5.97
Bottom Side	4	50	1.96
Bottom Side	6	50	1.37
Bottom Side	8	50	0.86
Bottom Side	10	50	0.63
Bottom Side	12	50	0.28
Bottom Side	14	50	0.34
Bottom Side	16	50	0.29
Bottom Side	18	50	0.25
Top Side	0	50	0.99
Top Side	2	50	0.72
Top Side	4	50	0.40
Top Side	6	50	0.41
Top Side	8	50	0.27
Top Side	10	50	0.21
Top Side	12	50	0.21
Top Side	14	50	0.23
Top Side	16	50	0.21
Top Side	18	50	0.21

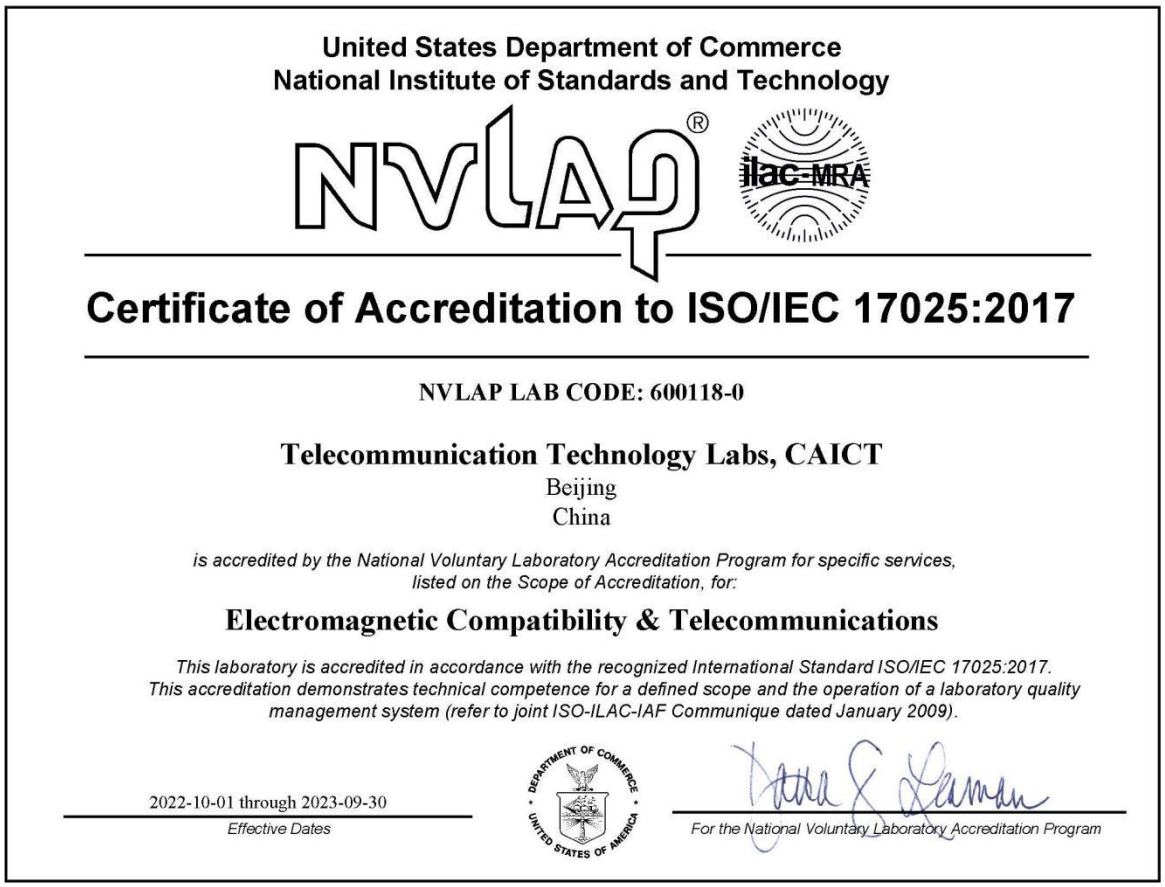
8 MAIN TEST INSTRUMENTS

	Name	Type	Serial Number	Calibration Date	Valid Period
01	Electromagnetic field probe	EHP-200AC	180ZX10205	May 25, 2022	One year

ANNEX A H-field and SAR Simulation Results

Refer to WPT SAR Compliance Simulation Report for WCJ05ZM report

ANNEX B Accreditation Certificate



United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

ilac-MRA

Certificate of Accreditation to ISO/IEC 17025:2017

NVLAP LAB CODE: 600118-0

Telecommunication Technology Labs, CAICT
Beijing
China

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

Electromagnetic Compatibility & Telecommunications

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).

2022-10-01 through 2023-09-30
Effective Dates

DEPARTMENT OF COMMERCE * UNITED STATES OF AMERICA *

For the National Voluntary Laboratory Accreditation Program