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RF Exposure Evaluation Declaration

Report No.: S202205270617E09
Report Version: V01
Issue Date: 08-12-2022

Applicant: ROIDMI Information Technology Co., Ltd.
Address: Layer4, Building C8, NO.1699, Huishan Road Huishan Economic Development District Wuxi, China
FCC ID: 2AR98-JCZ06
Application Type: Certification
Product: Base Station
Model No.: JCZ06RM,JCZ06RM*(*Could be 0-9 or A-Z,indicate for different color and accessories)
Trade Mark: 
FCC Classification: Digital Transmission System (DTS)
FCC Rule Part(s): Part 15 Subpart C (15.247)
Test Procedure(s): ANSI C63.10-2013, KDB 558074 D01v05r02
Test Date: July 26 ~ July 29, 2022

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Engineer Manager

The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in KDB 558074 D01. Test results reported herein relate only to the item(s) tested.

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The test report must not be used by the client to claim product certifications, approval, or endorsement by NVLAP, NIST or any agency of U.S. Government.

Revision History

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S202205270617E09	Rev. 01	/	08-12-2022

1. PRODUCT INFORMATION

1.1. Equipment Description

Product Name:	Base Station
Model Name:	JCZ06RM
Additional Model:	JCZ06RM*(*Could be 0-9 or A-Z,indicate for different color and accessories)
Model Description:	All models are electrically identical, only color and accessories are different.
Trade Mark:	
Rated value :	Rated Input:100-130V~, 50-60Hz Rated Output:24Vdc 1.2A Dust Collection Power:850W Charging Power:30W Cleaning Power:40W
Wi-Fi Specification:	802.11b/g/n-HT20

1.2. Product Specification Subjective to this Report

Frequency Range:	802.11b/g/n-HT20: 2412 ~ 2462MHz
Channel Number:	802.11b/g/n-HT20: 11
Type of Modulation:	802.11b: DSSS 802.11g/n: OFDM
Data Rate:	802.11b: 1/2/5.5/11Mbps 802.11g: 6/9/12/18/24/36/48/54Mbps 802.11n: MCS0~MCS7
Antenna Type:	PCB Antenna
Antenna Gain:	3.92dBi

2. RF Exposure Evaluation

2.1. Limits

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Average Time (Minutes)
(A) Limits for Occupational/ Control Exposures				
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6
(B) Limits for General Population/ Uncontrolled Exposures				
300-1500	--	--	f/1500	6
1500-100,000	--	--	1	30

f= Frequency in MHz

Calculation Formula: $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot r^2)$

Where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

r = distance between observation point and center of the radiator in cm

P_d is the limit of MPE, 1mW/cm². If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

2.2. Test Result of RF Exposure Evaluation

Product	Base Station
Test Item	RF Exposure Evaluation

Test Mode	Frequency Band (MHz)	Maximum PK Output Power (dBm)	Power Density at R = 20 cm (mW/cm ²)	Limit (mW/cm ²)
802.11b/g/n	2412 ~ 2462	17.48	0.0275	1
Note: $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot r^2) = (10^{(21.4/10)}) / (4 \cdot 3.1416 \cdot 20^2) = 0.0275 \text{ mW/cm}^2$				

CONCLUSION:

The Max Power Density at R (20 cm) = 0.0275mW/cm² < 1mW/cm².

So, the EUT complies with the requirement.

_____ The End _____