



Certificate #2343.01

TEST REPORT N°: CRWJ-ESH-P25120941B-5

MPE Test Report

Applicant:	Zhejiang Lingzhu Technology Co., Ltd.
Address:	Room 302, No 1 Building Huace Center, Xihu District, Hangzhou City, Zhejiang Province, China
Manufacturer:	Zhejiang Lingzhu Technology Co., Ltd.
Address:	Room 302, No 1 Building Huace Center, Xihu District, Hangzhou City, Zhejiang Province, China
Factory:	Hangzhou Xizhi Electronics Co., Ltd.
Address:	2nd Floor, Building 3, No. 8, Yuyang Road, Lushan Street, Fuyang District, Hangzhou City, Zhejiang Province, China
This document includes 9 pages	

Product Name:	Smart Battery Doorbell	
Test Model:	SC162-WCD3A	
Serial Models:	SC162-WCxyz (The main differences between models lie in appearance, color, camera resolution, and sensors or lenses. Apart from these, the PCB, software and hardware versions, antennas, etc., are all the same.)	
Brand Name:	--	
FCC ID:	2BEWXSC162A	
Rated Voltage/Power:	AC 8-24V~ 50/60Hz 200mA or 5V= 1.5A	
Received Date:	Dec. 12, 2025	
Test Date:	Dec. 15, 2025 to Jan. 09, 2026	
Applicable Standards:	47 CFR Part 2 Subpart J (Section 1.1091)	
Clause Examined:	All Clauses Relevant	

CONCLUSION : The submitted sample was found to **COMPLY** with the test requirement.

Test done by:

Ghost Li

Name: Ghost Li
Title: Project Engineer
Date: Jan. 16, 2026

Approved by:

Sean Yu

Name: Sean YU
Title: RF Supervisor
Date: Jan. 16, 2026

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TEST REPORT N°: CRWJ-ESH-P25120941B-5

Table of Contents

Release Control Record	3
1 General Information	4
1.1 General Description of EUT	4
2 RF Exposure	7
2.1 Limits for Maximum Permissible Exposure (MPE)	7
2.2 MPE Calculation Formula	7
2.3 Classification	7
2.4 Calculation Result of Maximum Permissible Exposure	8



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Release Control Record

Issue No.	Description	Date Issued
CRWJ-ESH-P25120941B-5	Original release	Jan. 16, 2026



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1 General Information

1.1 General Description of EUT

BLE:

Product	Smart Battery Doorbell
Brand	--
Test Model	SC162-WCD3A
Serial Models	SC162-WCxyz (The main differences between models lie in appearance, color, camera resolution, and sensors or lenses. Apart from these, the PCB, software and hardware versions, antennas, etc., are all the same.)
Power Rating	8-24V~ 50/60Hz 200mA or 5V= 1.5A
Modulation Type	GFSK
Modulation Technology	Bluetooth Low Energy 5.0
Operating Frequency	2402MHz ~ 2480MHz
Number of Channel	40
Output Power	4.15 dBm
Antenna Type	Dipole Antenna
Antenna Connector	--
Antenna Gain	1.05 dBi
Product SW/HW version	--
Radio SW/HW version	--
Test SW version	--
RF power setting in Test SW	--



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2.4G WiFi:

Product	Smart Battery Doorbell
Brand	--
Test Model	SC162-WCD3A
Serial Models	SC162-WCxyz (The main differences between models lie in appearance, color, camera resolution, and sensors or lenses. Apart from these, the PCB, software and hardware versions, antennas, etc., are all the same.)
Power Rating	8-24V~ 50/60Hz 200mA or 5V== 1.5A
Modulation Type	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
Modulation Technology	DSSS, OFDM
Operating Frequency	2412MHz ~ 2462MHz
Number of Channel	802.11b, 802.11g and 802.11n (HT20):11 802.11n (HT40):9
Output Power	16.85 dBm
Antenna Type	Dipole Antenna
Antenna Connector	--
Antenna Gain	1.05 dBi
Product SW/HW version	--
Radio SW/HW version	--
Test SW version	--
RF power setting in Test SW	--



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433.92MHz:

Product	Smart Battery Doorbell
Brand	--
Test Model	SC162-WCD3A
Serial Models	SC162-WCxyz (The main differences between models lie in appearance, color, camera resolution, and sensors or lenses. Apart from these, the PCB, software and hardware versions, antennas, etc., are all the same.)
Power Rating	8-24V~ 50/60Hz 200mA or 5V= 1.5A
Modulation Type	ASK
Operating Frequency	433.92MHz
Antenna Gain	-19.72 dBi
Number of Channel	1
Antenna Type	Monopole Antenna
Antenna Connector	--

Note:

1. For more details, please refer to the User's manual of the EUT.



TEST REPORT N°: CRWJ-ESH-P25120941B-5

2 RF Exposure

2.1 Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Average Time (minutes)
Limits For General Population / Uncontrolled Exposure				
300-1,500	-	-	F/1500	30
1,500-100,000	-	-	1.0	30

F = Frequency in MHz

2.2 MPE Calculation Formula

Power density (S) is calculated according to the formula:

$$S = PG / (4\pi R^2)$$

Where S = power density in mW/cm²

P = transmit power in mW

G = numeric gain of transmit antenna (numeric gain=Log-1(dB antenna gain/10))

R = distance (cm)

2.3 Classification

The antenna of this product, under normal use condition, is at least 20cm from the body of the user. So the device is classified as **Mobile Device**.



TEST REPORT N°: CRWJ-ESH-P25120941B-5

2.4 Calculation Result of Maximum Permissible Exposure

BLE:

The tuned conducted Power (declared by client)

Frequency (MHz)	Target Power (dBm)	Tolerance (dBm)	Lower Tolerance (dBm)	Upper Tolerance (dBm)
2402-2480	4	±1	3	5

The measured conducted Power

Mode	Frequency (MHz)	Max. Conducted Output power(dBm)
BLE_2M	2402	4.15

Frequency Band (MHz)	Max. Conducted output power(dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
2402-2480	5	1.05	20	0.0008	1

2.4G WiFi:

The tuned conducted Power (declared by client)

Frequency (MHz)	Target Power (dBm)	Tolerance (dBm)	Lower Tolerance (dBm)	Upper Tolerance (dBm)
2412-2462	16	±1	15	17

The measured conducted Power

Mode	Frequency (MHz)	Max. Conducted Output power(dBm)
11b	2462	16.85

Frequency Band (MHz)	Max. Conducted output power(dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
2412-2462	17	1.05	20	0.0127	1

433.92MHz:

Frequency Band (MHz)	Max. Field Strength @3m (dBuV/m)	EIRP	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
433.92	89.93	-5.27	20	5.91×10^{-5}	0.289

EIRP = dBuV/m - 95.2



TEST REPORT N°: CRWJ-ESH-P25120941B-5

2.4G WiFi and 433.92 MHz operate simultaneously:

Wireless technology	Power Density (mW/cm ²)	Limit (mW/cm ²)	Simultaneously Power Density (mW/cm ²)	Simultaneously Limit (mW/cm ²)
2.4G WiFi	0.0127	1	2.04×10^{-4}	1
433.92 MHz	5.91×10^{-5}	0.289		

Conclusion: The calculation result of MPE is less than the limit.

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