

# TEST REPORT

**Reference No.**..... : WTD24D03065704W002  
**FCC ID** ..... : ZLZ-ZLG600A-T2  
**Applicant**..... : Shenzhen Mindray BIO-Medical electronics Co., LTD.  
**Address**..... : Mindray Building, Keji 12th Road South, Hi-tech Ind, Shenzhen China  
**Manufacturer** ..... : Shenzhen Mindray BIO-Medical electronics Co., LTD.  
**Address**..... : Mindray Building, Keji 12th Road South, Hi-tech Ind, Shenzhen China  
**Product**..... : Card Reader Module  
**Model(s)** ..... : ZLG600A-T2  
**Standards**..... : 47 CFR Part 2 §2. 1091  
**Date of Receipt sample** .... : 2024-03-28  
**Date of Test** ..... : 2024-03-28 to 2024-04-10  
**Date of Issue**..... : 2024-04-10  
**Test Result**..... : **Pass**

**Remarks:**

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

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3. Revision History

Test Report No.	Date of Receipt Sample	Date of Test	Date of Issue	Purpose	Comment	Approved
WTD24D03065704W002	2024-03-28	2024-03-28 to 2024-04-10	2024-04-10	Original	-	Valid

## 4. General Information

### 4.1. General Description of E.U.T.

Product:	Card Reader Module
Model(s):	ZLG600A-T2
Test Sample No.:	1-1/3
Model Description:	N/A
Hardware Version:	N/A
Software Version:	N/A

### 4.2. Details of E.U.T.

Operation Frequency:	13.56MHz±7kHz
Transmitted Power:	68.20dBuV/m @3m distance
Technology:	ASK
Antenna installation:	Inductive loop coil antenna
Antenna gain:	N/A

Note:

#: The antenna gain is provided by the applicant, and the applicant should be responsible for its authenticity, WALTERK lab has not verified the authenticity of its information.

Ratings:	DC 5V
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#### 4.3. Test Facility

The test facility has a test site registered with the following organizations:

**ISED CAB identifier: CN0013. Test Firm Registration No.: 7760A.**

Waltek Testing Group Co., Ltd. Has been registered and fully described in a report filed with the Industry Canada. The acceptance letter from the Industry Canada is maintained in our files.

Registration number 7760A, October 15, 2016.

**FCC Designation No.: CN1201. Test Firm Registration No.: 523476.**

Waltek Testing Group Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration number 523476, September 10, 2019.

#### 4.4. Subcontracted

Whether parts of tests for the product have been subcontracted to other labs:

☐ Yes ☒ No

If Yes, list the related test items and lab information:

Test Lab: N/A

Lab address: N/A

Test items: N/A

#### 4.5. Abnormalities from Standard Conditions

None.

## 5. Test Summary

Test Items	Test Requirement	Result
Maximum Permissible Exposure (Exposure of Humans to RF Fields)	47 CFR Part 2 §2. 1091	PASS

## 6. RF Exposure

Test Requirement: FCC 47CFR Part 2 Subpart J Section 2.1091  
 47 CFR Part 1 §1.1307  
 47 CFR Part 1 §1.1310  
 Evaluation Method: KDB 447498 D01 General RF Exposure Guidance v06

### 6.1. Definitions

According to § 2.1093 (b), A mobile device is defined as a transmitting device designed to be used in other than fixed locations and to generally be used in such a way that a separation distance of at least 20 centimeters is normally maintained between the RF source's radiating structure(s) and the body of the user or nearby persons.

This device belongs to mobile device and with multiple RF sources.

### 6.2. Method of Evaluation

**Determination of Exemption:**  
**For single RF sources**

#### Option A

##### Option A 1-mW Test Exemption

Applies to all frequencies and all distances

- a) Could be considered SAR-based and MPE-based exclusions
- b)  $P < 1\text{mW}$
- c) Limitation—when there are simultaneously operating transmitters this exclusion only applies when all simultaneously operating transmitters meet this exemption
- d) Refer 1.1307(b)(3)(i)(A) and 1.1307(b)(3)(ii)(A)

#### Option B SAR-Based Exemption

Frequency range 300 MHz -6 GHz,  $5\text{mm} \leq \text{distance} \leq 40\text{cm}$

- a) The maximum time-averaged power or effective radiated power (ERP), whichever is greater,  $\leq P_{th}$ .
- b)  $P_{th}$  is calculated based on separation distance  $d$  cm from transmitter to person for the device operating at  $f$  GHz.

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20\text{ cm}} (d/20\text{ cm})^x & d \leq 20\text{ cm} \\ ERP_{20\text{ cm}} & 20\text{ cm} < d \leq 40\text{ cm} \end{cases}$$

Where

$$x = -\log_{10} \left( \frac{60}{ERP_{20\text{ cm}} \sqrt{f}} \right) \text{ and } f \text{ is in GHz;}$$

and

$$ERP_{20\text{ cm}} \text{ (mW)} = \begin{cases} 2040f & 0.3\text{ GHz} \leq f < 1.5\text{ GHz} \\ 3060 & 1.5\text{ GHz} \leq f \leq 6\text{ GHz} \end{cases}$$

$d$  = the separation distance (cm);

**Option C MPE-Based Exemption**

1.1307(b)(3)(i)(C): ERP is below a threshold calculated based on the distance R between the person and the antenna / radiating structure, where  $R > \lambda / 2\pi$ .

Table 1 to § 1.1307(b)(3)(i)(C) - Single RF Sources Subject to Routine Environmental Evaluation

RF Source frequency (MHz)	Threshold ERP (watts)
0.3-1.34	$1,920 R^2$ .
1.34-30	$3,450 R^2/f^2$ .
30-300	$3.83 R^2$ .
300-1,500	$0.0128 R^2f$ .
1,500-100,000	$19.2R^2$ .
Note: R in meters, f in MHz	

**For multiple RF sources**

According to 47CFR 1.1307(b)(3)(ii), the calculation formula is as follow:

$$\sum_{i=1}^a \frac{P_i}{P_{th,i}} + \sum_{j=1}^b \frac{ERP_j}{ERP_{th,j}} + \sum_{k=1}^c \frac{Evaluated_k}{Exposure Limit_k} \leq 1$$

**6.3. Calculation formula**

According to ANSI C63.10,

$$E[\text{dB}\mu\text{V/m}] = \text{EIRP}[\text{dBm}] - 20 \log(d[\text{m}]) + 104.77$$

For conducted measurements below 1000 MHz, the field strength shall be computed as specified in above, and then an additional 4.7 dB shall be added as an upper bound on the field strength that would be observed on a test range with a ground plane for frequencies between 30 MHz and 1000 MHz, or an additional 6 dB shall be added for frequencies below 30 MHz.



#### 6.4. Evaluation Results

E[dBμV/m]	d[m]	EIRP[dBm]	EIRP[mW]
68.20	3	-21.02	0.007893

**Conclusion:**

EIRP=0.007893mW<1mW

**Option A** is applicable.

RF Exposure is FCC compliant.

=====End of Report=====