

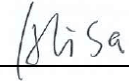
## RF Exposure Evaluation Report

**Report Reference No.....: MTWG2209350-H**

**FCC ID..... : 2A397-HK578**

Compiled by

( position+printed name+signature)..: File administrators Alisa Luo



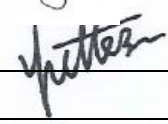
Supervised by

( position+printed name+signature)..: Test Engineer Sunny Deng



Approved by

( position+printed name+signature)..: Manager Yvette Zhou



Date of issue.....: **October 18, 2022**

**Representative Laboratory Name.: Shenzhen Most Technology Service Co., Ltd.**

Address .....: No.5, 2nd Langshan Road, North District, Hi-tech Industrial Park,  
 Nanshan, Shenzhen, Guangdong, China.

**Applicant's name.....: QINGDAO HISTONE INTELLIGENT COMMERCIAL SYSTEM CO., LTD.**

Address .....: Wisdom Valley, No.8 Shengshui Road, Laoshan District, Qingdao  
 City, China

**Test specification/ Standard .....: 47 CFR Part 1.1307**

**47 CFR Part 1.1310**

**KDB447498D01 General RF Exposure Guidance v06**

TRF Originator.....: Shenzhen Most Technology Service Co., Ltd.

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**Test item description .....: POS COMPUTER**

Trade Mark .....: Histone

Manufacturer .....: **QINGDAO HISTONE INTELLIGENT COMMERCIAL SYSTEM CO., LTD.**

Model/Type reference.....: HK578

Listed Models .....: HK578 J6412, HK650

Modulation Type.....: ASK

Operation Frequency.....: 13.56MHz

Hardware Version.....: HS-J6412

Software Version .....: MEHL0401

Rating .....

24V~, 2.5A, 60W  
 (by Adapter 1: 100-240V~, 50-60Hz, 1.8A(FSP060-DAAN3))  
 24V~, 5A, 120W  
 (by Adapter 2: 100-240V~, 50-60Hz, 1.8A(FSP120-AAAN3))  
 24V~, 3.75A, 90W  
 (by Adapter 3: 100-240V~, 50/60Hz, 2.5A(GM95-240375-F))

Result.....: **PASS**

**TEST REPORT**

Equipment under Test : POS COMPUTER

Model /Type : HK578

Listed Models : HK578 J6412, HK650

Remark : All models are identical to each other, except model name.

Applicant : **QINGDAO HISTONE INTELLIGENT COMMERCIAL SYSTEM CO., LTD.**

Address : Wisdom Valley, No.8 Shengshui Road, Laoshan District, Qingdao City, China

Manufacturer : **QINGDAO HISTONE INTELLIGENT COMMERCIAL SYSTEM CO., LTD.**

Address : Wisdom Valley, No.8 Shengshui Road, Laoshan District, Qingdao City, China

<b>Test Result:</b>	<b>PASS</b>
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The test report merely corresponds to the test sample.  
It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

## 1. Revision History

Revision	Issue Date	Revisions	Revised By
00	2022-10-18	Initial Issue	Alisa Luo

## **2. SAR Evaluation**

### **2.1 RF Exposure Compliance Requirement**

#### **2.1.1 Standard Requirement**

According to KDB447498D01 General RF Exposure Guidance v06

##### 4.3.1. Standalone SAR test exclusion considerations

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

#### **2.1.2 Limits**

For frequencies below 100 MHz, the following may be considered for SAR test exclusion (also illustrated in Appendix C): 33

- 1) For test separation distances  $> 50$  mm and  $< 200$  mm, the power threshold at the corresponding test separation distance at 100 MHz in step b) is multiplied by  $[1 + \log(100/f(\text{MHz}))]$
- 2) For test separation distances  $\leq 50$  mm, the power threshold determined by the equation in c) 1) for 50 mm and 100 MHz is multiplied by  $\frac{1}{2}$
- 3) SAR measurement procedures are not established below 100 MHz.

When SAR test exclusion cannot be applied, a KDB inquiry is required to determine SAR evaluation requirements for any SAR test results below 100 MHz to be acceptable.34

**2.1.3 EUT RF Exposure**

$EIRP = PT * GT = (E \times D)^2 / 30$

where:

PT = transmitter output power in watts,

GT = numeric gain of the transmitting antenna (unitless),

E = electric field strength in V/m, --- $10^{(dB\mu V/m)/20} / 10^6$ ,

D = measurement distance in meters (m)---3m,

So  $PT = (E \times D)^2 / 30 / GT$

The worst case (refer to report MTWG2207207) is below:

Antenna polarization: Horizontal		
Frequency (MHz)	Level (dBuV/m)	Polarization
13.56	78.1	Peak

For 13.56MHz wireless:

Field strength=78.1 dBuV/m

Ant gain:3dBi;so Ant numeric gain=2

$EIRP = PT * GT = (E \times D)^2 / 30 = (10^{(dB\mu V/m)/20} / 10^{6*3})^2 / 30 = 0.00000192$

So  $PT = EIRP / GT = 0.0000108W = 0.0108mW$

So  $(0.0108mW / 5mm) * \sqrt{0.43392GHz} = 0.000096$

exclusion=0.000096 < 3.0 for 1-g SAR

So the SAR report is not required.

.....**THE END OF REPORT**.....