

## RF Exposure Evaluation Report

**Report Reference No.....: MTEB23050232-H**

**FCC ID..... : 2A397-HK568U**

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Date of issue.....: **June 19, 2023**

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

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**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.....: HK568U

Listed Models .....: N/A

Modulation Type .....: ASK

Operation Frequency.....: 13.56MHz

Hardware Version.....: HS-TGL

Software Version .....: S724

	DC 24V by Adapter
	24V <sub>DC</sub> , 2.5A, 60W
	(by Adapter 1: 100-240V <sub>AC</sub> , 50/60Hz, 2.0A(GM60-240250-F))
Rating .....	24V <sub>DC</sub> , 2.5A, 60W
	(by Adapter 2: 100-240V <sub>AC</sub> , 50-60Hz, 1.8A(FSP060-DAAN3))
	24V <sub>DC</sub> , 5A, 120W
	(by Adapter 3: 100-240V <sub>AC</sub> , 50-60Hz, 1.8A(FSP120-AAAN3))
Result.....	PASS

**TEST REPORT**

Equipment under Test : POS COMPUTER

Model /Type : HK568U

Listed Models : N/A

Remark : N/A

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	2023-05-19	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 **MTEB23050232**) is below:

Antenna polarization: Horizontal		
Frequency (MHz)	Level (dBuV/m)	Polarization
13.56	78.8	Peak

For 13.56MHz wireless:

Field strength=78.9 dBuV/m

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

$EIRP = PT * GT = (E \times D)^2 / 30 = (10^{(dB\mu V/m)/20} / 10^6 * 3)^2 / 30 = 0.0000225$

So  $PT = EIRP / GT = 0.00001125W = 0.001125mW$

So  $(0.0096mW/5mm) * \sqrt{0.01356GHz} = 0.0000261$

exclusion=0.0000261<3.0 for 1-g SAR

So the SAR report is not required.

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