

RF Exposure Evaluation Report

Report Reference No...... : **MTEB25110043-H**

FCC ID..... : **2A397-HK578A**

Compiled by

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Date of issue..... : **November 06, 2025**

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..... : HK578A

Listed Models : N/A

Modulation Type..... : ASK

Operation Frequency..... : 13.56MHz

Hardware Version..... : HS-ADL-P

Software Version..... : MADP

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

TEST REPORT

Equipment under Test : POS COMPUTER

Model /Type : HK578A

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

Test Result:	PASS
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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	2025.11.06	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

According to FCC Part1.1310: 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 part1.1307(b)

TABLE 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)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3–3.0	614	1.63	*(100)	6
3.0–30	1842/f	4.89/f	*(900/f ²)	6
30–300	61.4	0.163	1.0	6
300–1500			f/300	6
1500–100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3–1.34	614	1.63	*(100)	30
1.34–30	824/f	2.19/f	*(180/f ²)	30
30–300	27.5	0.073	0.2	30
300–1500			f/1500	30
1500–100,000			1.0	30

F= Frequency in MHz

Friis Formula

Friis transmission formula: $P_d = (P_{out} * G) / (4 * \pi * R^2)$ 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, 1 mW/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.

2.1.3 EUT RF Exposure

$$\text{EIRP} = \text{PT} \times \text{GT} = (\text{E} \times \text{D})^2 / 30$$

where:

PT = transmitter output power in watts,

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

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

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

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

For 13.56MHz wireless:

Field strength=78.90 dBuV/m

EIRP=78.90 dBuV/m-95.2+6=-10.30dBm

Channel	EIRP(dBm)	Tune up tolerance (dBm)	Maximum tune-up Power (dBm)	Maximum tune-up Power (MW)	Power Density at R = 20 cm (mW/cm2)	Limit	Result
13.56 MHz	-10.30	± 1	-9.30	0.117	0.0000232	0.9789	Pass

Note: 1) Refer to report **MTEB25110043** for EUT test Max Conducted average Output Power value.

Note: 2) $\text{Pd} = (\text{EIRP}) / (4 \times \text{Pi} \times \text{R}^2) = (0.117) / (4 \times 3.1416 \times 20^2) = 0.0000232$

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