Shenzhen Most Technology Service Co., Ltd.
East A, 1 floor of New Aolin Factory buiding, Langshan Erlu, North District,
Hi-tech Industry Park, Nanshan,Shenzhen,Guangdong,China

RF Exposure Evaluation Report

Report Reference No..... :	**MTEB25010132-H**
FCC ID..... :	**2A397-HK526**
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.....:	**Jan.16,2025**
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.

Test item description.....:	POS COMPUTER
Trade Mark.....:	HiStone
Model/Type reference..... :	HK526
Listed Models ..... :	HK526T
Modulation Type..... :	GFSK GFSK, π/4DQPSK, 8DPSK b: DSSS g/n:OFDM OFDM
Operation Frequency..... :	BT: From 2402MHz to 2480MHz WIFI2.4G: From 2412MHz to 2462MHz WIFI 5G: From 5180MHz-5240MHz From 5260MHz-5320MHz From 5500MHz-5720MHz From 5745MHz-5825MHz
Hardware Version.....	450
Software Version.....	HK526
Rating.....:	DC 24V by Adapter
Result.....:	**PASS**

T E S T R E P O R T

Equipment under Test	:	POS COMPUTER
Model /Type	:	HK526
Listed Models	:	HK526T
Remark		Only the model “ HK526 ” was tested, Their electrical circuit design, layout, components used and internal wiring are identical, Only the model name different.
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**

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	2025.01.16	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: Pd = (Pout*G)/(4* Pi * R 2) Where
Pd = power density in mW/cm2
Pout = output power to antenna in mW
G = gain of antenna in linear scale
Pi = 3.1416

R = distance between observation point and center of the radiator in cm
Pd id 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

Antenna Gain: 5.26dBi
BT classic

GFSK			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power (dBm)
Lowest(2402MHz)	2.289	2.289±1	3.289
Middle(2441MHz)	1.674	1.674±1	2.674
Highest(2480MHz)	0.971	0.971±1	1.971

π /4DQPSK			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power (dBm)
Lowest(2402MHz)	3.090	3.090±1	4.09
Middle(2441MHz)	2.503	2.503±1	3.503
Highest(2480MHz)	1.811	1.811±1	2.811

8DPSK			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power (dBm)
Lowest(2402MHz)	3.497	3.497±1	4.497
Middle(2441MHz)	2.879	2.879±1	3.879
Highest(2480MHz)	2.195	2.195±1	3.195

Worst case: 8DPSK						
Channel	Maximum Peak Conducted Output Power (dBm)	Maximum Peak Conducted Output Power (MW)	Antenna Gain (dBi)	Power Density at R = 20 cm (mW/cm2)	Limit	Result
Lowest(2402MHz)	4.497	2.82	5.26	0.0019	1.0	Pass

Note: 1) Refer to report **MTEB25010132-R** for EUT test Max Conducted average Output Power value.
Note: 2) Pd = (Pout*G)/(4* Pi * R^2)=(2.82*3.36)/(4*3.1416*20^2)=0.0019
Note: 3)EUT's Bluetooth module is more than 20cm away from the human body.

Antenna Gain: 5.26dBi
BLE

GFSK			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power (dBm)
Lowest(2402MHz)	4.600	4.600±1	5.6
Middle(2440MHz)	4.072	4.072±1	5.072
Highest(2480MHz)	3.450	3.450±1	4.45

Worst case: GFSK						
Channel	Maximum Peak Conducted Output Power (dBm)	Maximum Peak Conducted Output Power (MW)	Antenna Gain (dBi)	Power Density at R = 20 cm (mW/cm2)	Limit	Result
Lowest(2402MHz)	5.6	3.63	5.26	0.0024	1.0	Pass

Note: 1) Refer to report **MTEB25010132-R1** for EUT test Max Conducted average Output Power value.
Note: 2) Pd = (Pout*G)/(4* Pi * R^2)=(3.63*3.36)/(4*3.1416*20^2)=0.0024
Note: 3)EUT's Bluetooth module is more than 20cm away from the human body.

Antenna gain: 5.26dBi
WIFI 2.4G :

802.11b			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power (dBm)
Lowest(2412MHz)	12.60	12.60±1	13.6
Middle(2437MHz)	12.25	12.25±1	13.25
Highest(2462MHz)	12.74	12.74±1	13.74

802.11g			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power (dBm)
Lowest(2412MHz)	12.55	12.55±1	13.55
Middle(2437MHz)	12.39	12.39±1	13.39
Highest(2462MHz)	11.69	11.69±1	12.69

802.11n(H20)			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power (dBm)
Lowest(2412MHz)	12.21	12.21±1	13.21
Middle(2437MHz)	11.62	11.62±1	12.62
Highest(2462MHz)	11.31	11.31±1	12.31

802.11n(H40)			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power (dBm)
Lowest(2422MHz)	12.32	12.32±1	13.32
Middle(2437MHz)	12.64	12.64±1	13.64
Highest(2452MHz)	11.78	11.78±1	12.78

WIFI 2.4G

Worst case: 802.11b						
Channel	Maximum tune-up Power (dBm)	Maximum tune-up Power (MW)	Antenna Gain (dBi)	Power Density at R = 20 cm (mW/cm2)	Limit	Result
Highest(2462MHz)	13.74	23.66	5.26	0.0158	1.0	Pass

Note: 1) Refer to report **MTEB25010132-R2** for EUT test Max Conducted average Output Power value.
Note: 2) Pd = (Pout*G)/(4* Pi * R^2)=(23.66*3.36)/(4*3.1416*20^2)=0.0158
Note: 3)EUT's Wifi module is more than 20cm away from the human body.

Antenna gain:
5180MHz-5240MHz:4.72dBi,
5260MHz-5320MHz:4.72dBi,
5500MHz-5700MHz:5.53dBi,
5745MHz-5825MHz:6.19dBi,
WIFI 5G

Mode	Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power (dBm)
IEEE 802.11a	36	10.172	10.172±1	11.172
	40	9.413	9.413±1	10.413
	48	11.246	11.246±1	12.246
	52	12.654	12.654±1	13.654
	56	10.493	10.493±1	11.493
	64	11.070	11.070±1	12.07
	100	9.127	9.127±1	10.127
	120	10.210	10.210±1	11.21
	140	8.533	8.533±1	9.533
IEEE 802.11n_20	36	9.592	9.592±1	10.592
	40	10.140	10.140±1	11.14
	48	11.465	11.465±1	12.465
	52	10.686	10.686±1	11.686
	56	10.205	10.205±1	11.205
	64	10.530	10.530±1	11.53
	100	8.956	8.956±1	9.956
	120	10.517	10.517±1	11.517
	140	7.178	7.178±1	8.178
IEEE 802.11n_40	38	8.703	8.703±1	9.703
	46	8.039	8.039±1	9.039
	54	8.028	8.028±1	9.028
	62	8.310	8.310±1	9.31
	102	6.904	6.904±1	7.904
	118	7.675	7.675±1	8.675
	134	6.929	6.929±1	7.929
IEEE 802.11ac_20	36	9.420	9.420±1	10.42
	40	9.845	9.845±1	10.845
	48	10.679	10.679±1	11.679
	52	10.307	10.307±1	11.307
	56	9.674	9.674±1	10.674
	64	9.872	9.872±1	10.872
	100	8.703	8.703±1	9.703
	120	9.741	9.741±1	10.741
	140	7.193	7.193±1	8.193
IEEE 802.11ac_40	38	8.510	8.510±1	9.51
	46	9.360	9.360±1	10.36
	54	7.536	7.536±1	8.536
	62	7.646	7.646±1	8.646
	102	6.639	6.639±1	7.639
	118	8.372	8.372±1	9.372
	134	6.431	6.431±1	7.431
IEEE 802.11ac_80	42	8.229	8.229±1	9.229
	58	11.885	11.885±1	12.885
	106	5.811	5.811±1	6.811

Mode	Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power (dBm)
IEEE 802.11a	149	9.438	9.438±1	10.438
	157	9.705	9.705±1	10.705
	165	9.781	9.781±1	10.781
IEEE 802.11n_20	149	9.021	9.021±1	10.021
	157	9.671	9.671±1	10.671
	165	8.796	8.796±1	9.796
IEEE 802.11n_40	151	7.698	7.698±1	8.698
	159	7.074	7.074±1	8.074
IEEE 802.11ac_20	149	8.646	8.646±1	9.646
	157	8.954	8.954±1	9.954
	165	8.801	8.801±1	9.801
IEEE 802.11ac_40	151	7.294	7.294±1	8.294
	159	7.674	7.674±1	8.674
IEEE 802.11ac_80	155	5.854	5.854±1	6.854

U-NII 1

Worst case:IEEE for 802.11n(HT20)						
Channel	Maximum Peak Conducted Output Power	Maximum Peak Conducted Output Power	Antenna Gain	Power Density at R = 20 cm	Limit	Result
	(dBm)	(MW)	(dBi)	(mW/cm2)		
Lowest(5240MHz)	12.465	17.64	4.72	0.0104	1.0	Pass

Note: 1) Refer to report **MTEB25010132-R3** for EUT test Max Conducted average Output Power value.
Note: 2) Pd = (Pout*G)/(4* Pi * R^2)=(17.64*2.96)/(4*3.1416*20^2)=0.0104
Note: 3)EUT's Wifi module is more than 20cm away from the human body.

U-NII 2A

Worst case:IEEE for 802.11a						
Channel	Maximum Peak Conducted Output Power	Maximum Peak Conducted Output Power	Antenna Gain	Power Density at R = 20 cm	Limit	Result
	(dBm)	(MW)	(dBi)	(mW/cm2)		
Lowest(5260MHz)	13.654	23.20	4.72	0.0137	1.0	Pass

Note: 1) Refer to report **MTEB25010132-R3** for EUT test Max Conducted average Output Power value.
Note: 2) Pd = (Pout*G)/(4* Pi * R^2)=(23.20*2.96)/(4*3.1416*20^2)=0.0137
Note: 3)EUT's Wifi module is more than 20cm away from the human body.

U-NII 2C

Worst case:IEEE for 802.11n(HT20)						
Channel	Maximum Peak Conducted Output Power	Maximum Peak Conducted Output Power	Antenna Gain	Power Density at R = 20 cm	Limit	Result
	(dBm)	(MW)	(dBi)	(mW/cm2)		
Lowest(5600MHz)	11.517	14.18	5.53	0.0101	1.0	Pass

Note: 1) Refer to report **MTEB25010132-R3** for EUT test Max Conducted average Output Power value.
Note: 2) Pd = (Pout*G)/(4* Pi * R^2)=(14.18*3.57)/(4*3.1416*20^2)=0.0101
Note: 3)EUT's Wifi module is more than 20cm away from the human body.

U-NII 3

Worst case:IEEE for 802.11a						
Channel	Maximum Peak Conducted Output Power	Maximum Peak Conducted Output Power	Antenna Gain	Power Density at R = 20 cm	Limit	Result
	(dBm)	(MW)	(dBi)	(mW/cm2)		
Lowest(5825MHz)	10.781	11.97	6.19	0.0099	1.0	Pass

Note: 1) Refer to report **MTEB25010132-R3** for EUT test Max Conducted average Output Power value.
Note: 2) Pd = (Pout*G)/(4* Pi * R^2)=(11.97*4.16)/(4*3.1416*20^2)=0.0099
Note: 3)EUT's Wifi module is more than 20cm away from the human body.

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