



# FCC Test Report

Report No: FCS202508160H01

Issued for

Applicant:	wuhanshidapengqibowangluokejiyouxiangongsi
Address:	No. 75, Yaocai Street, Yaoji Sub-district, Huangpi District Wuhan, Hubei, 430300
Product Name:	Sauna Home
Brand Name:	X-Vcak
Model Name:	KC-S02
Series Model:	N/A
FCC ID:	2BRKU-KC-S02
Test Standard:	FCC 47CFR §2.1091
Issued By: Flux Compliance Service Laboratory Add: Room 105 Floor Bao hao Technology Building 1 NO.15 Gong ye West Road Hi-Tech Industrial, Song shan lake Dongguan Tel: 769-27280901 Fax:769-27280901 <a href="http://www.FCS-lab.com">http://www.FCS-lab.com</a>	



## TEST RESULT CERTIFICATION

Applicant's Name.....: wuhanshidapengqibowangluokejiyouxiangongsi  
Address .....: No. 75, Yaocai Street, Yaoji Sub-district, Huangpi District  
Wuhan, Hubei, 430300

Manufacture's Name.....: wuhanshidapengqibowangluokejiyouxiangongsi  
Address .....: No. 75, Yaocai Street, Yaoji Sub-district, Huangpi District  
Wuhan, Hubei, 430300

### Product Description

Product Name.....: Sauna Home  
Brand Name .....: X-Vcak  
Model Name .....: KC-S02  
Series Model.....: N/A  
Test Standards.....: FCC 47CFR §2.1091  
447498 D01 Interim General RF Exposure Guidance v06

This device described above has been tested by Flux Compliance Service Laboratory, the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

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Date of Test.....:

Date (s) of performance of tests : Aug. 06, 2025 ~ Aug. 12, 2025

Date of Issue.....: Aug. 12, 2025

Test Result.....: Pass

Tested by

*Scott Shen*

(Scott Shen)

Reviewed by

*Duke Qian*

(Duke Qian)

Approved by

*Jack Wang*

(Jack Wang)



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### Revision History

Rev.	Issue Date	Contents
00	Aug. 12, 2025	Initial Issue

## 1. GENERAL INFORMATION

### 1.1 GENERAL DESCRIPTION OF THE EUT

Product Name	Sauna Home									
Brand	X-Vcak									
Model Number	KC-S02									
Series Model(s)	N/A									
Model Difference	N/A									
Product Description	<p>The EUT is Sauna Home</p> <table border="1"><tr><td>Operation Frequency:</td><td>2402~2480 MHz</td></tr><tr><td>Modulation Type:</td><td>GFSK, <math>\pi/4</math>-DQPSK, 8DPSK</td></tr><tr><td>Antenna gain:</td><td>5.3 dBi</td></tr><tr><td>Antenna Designation:</td><td>PCB antenna</td></tr></table>		Operation Frequency:	2402~2480 MHz	Modulation Type:	GFSK, $\pi/4$ -DQPSK, 8DPSK	Antenna gain:	5.3 dBi	Antenna Designation:	PCB antenna
Operation Frequency:	2402~2480 MHz									
Modulation Type:	GFSK, $\pi/4$ -DQPSK, 8DPSK									
Antenna gain:	5.3 dBi									
Antenna Designation:	PCB antenna									
Power Supply	Input: AC 90-264V, 50/60Hz									
Hardware version number	V1.0									
Software version number	V1.0									

## 1.2 TEST FACTORY

Company Name:	Flux Compliance Service Laboratory
Address:	Room 105 Floor Bao hao Technology Building 1 NO.15 Gong ye West Road Hi-Tech Industrial, Song shan lake Dongguan
Telephone:	+86-769-27280901
Fax:	+86-769-27280901
FCC Test Firm Registration Number: 514908 Designation number: CN0127 A2LA accreditation number: 5545.01 ISED Number: 25801 CAB ID : CN0097	

## 2. FCC 47CFR §2.1091 REQUIREMENT

### 2.1 TEST STANDARDS

According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

According to §1.1310 and §2.1091 RF exposure requirement

KDB447498 D01v06: Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies

The limit for Maximum Permissible Exposure (MPE) specified in FCC 1.1310 is followed. The gain of the antennas used in the product is extracted from the Antenna data sheets provided and also the maximum total power input to the antenna is measured. Through the Friis transmission formula and the maximum gain of the antenna, we can calculate the distance, away from the product, where the limit of MPE is reached.

Although the Friis Transmission formula is far field assumption, the calculated result of that is an over-prediction for near field power density. It is taken as worst case to specify the safety range.

### 2.2 LIMIT

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environmental impact of the human exposure to radio-frequency (RF) radiation as specified in 1.1307 (b)

#### Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm <sup>2</sup> )
<b>Limits for Occupational / controlled Exposures</b>			
300 - 1500	--	--	F/300
1500 – 100000	--	--	5.0
<b>Limits for General population / Uncontrolled Exposure</b>			
300 - 1500	--	--	F/1500
1500 – 100000	--	--	1.0

F= Frequency in MHz

## Friss Formula

Friss Transmission Formula:  $P_d = (P_{out} * G) / (4 * \pi * r^2)$

Where

$P_d$  = power density in  $\text{mW/cm}^2$

$P_{out}$  = output power to antenna in  $\text{mW}$

$G$  = gain of antenna in linear scale

$\pi = 3.1416$

$R$  = Distance between observation point and the center of radiator in  $\text{cm}$

If we know the maximum gain of the antenna and the total output power to the antenna, through calculation, we will know MPE value at distance 20cm.

## Classification

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. Warning statement to the user for keeping at least 20cm or more separation distance from the antenna should be included in the User manual. So, this device is classified as Mobile device.

## 2.3 TEST RESULT

Turn up

BT_Conducted	Mode	Frequency(MHz)		
Target (dBm)	GFSK	2402	2441	2480
		0	0	1
	$\pi/4$ -DQPSK	2402	2441	2480
		3	3	4
		2402	2441	2480
	8DPSK	3	3	4
		Tolerance $\pm$ (dB)		
	1			

Modulation Type	Output power		Antenna Gain (dBi)	Antenna Gain (linear)	MPE (mW/cm <sup>2</sup> )	MPE Limits (mW/cm <sup>2</sup> )
	dBm	mW				
BT(BR+EDR)	5	3.16	5.3	3.388	0.00213	1

Results: PASS, NO SAR required.

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