

S

T

S

L

A

B



RADIO TEST REPORT

Report No: STS2111097H01

Issued for

Guangzhou Weirun Information Technology Co., LTD

105B (Building 1), Building 4, No. 29, North Pier, Huangpu Village, Haizhu District, Guangzhou, Guangdong, China

Product Name:	Portable Sausa
Brand Name:	WILLOWYBE
Model Name:	AP
Series Model:	AP01,AP02,AP02,AP03,AP04,AP05, AP06,AP07,AP08,AP09
FCC ID:	2A3QS8944HL66LH8944
Test Standard:	FCC 47CFR §2.1091

Any reproduction of this document must be done in full. No single part of this document may be reproduced without permission from STS, all test data presented in this report is only applicable to presented test sample.

Shenzhen STS Test Services Co., Ltd.

A 1/F, Building B, Zhuoke Science Park, No.190 Chongqing Road, HepingShequ,
Fuyong Sub-District, Bao'an District, Shenzhen, Guang Dong, China

TEL: +86-755 3688 6288 FAX: +86-755 3688 6277 E-mail: sts@stsapp.com





Test Report Certification

Applicant's Name..... : Guangzhou Weirun Information Technology Co., LTD
Address : 105B (Building 1), Building 4, No. 29, North Pier, Huangpu Village, Haizhu District, Guangzhou, Guangdong, China
Manufacturer's Name : Guangzhou Weirun Information Technology Co., LTD
Address : 105B (Building 1), Building 4, No. 29, North Pier, Huangpu Village, Haizhu District, Guangzhou, Guangdong, China

Product Description

Product Name..... : Portable Sausa
Brand Name : WILLOWYBE
Model Name : AP
Series Model..... : AP01,AP02,AP02,AP03,AP04,AP05,
AP06,AP07,AP08,AP09

Standards..... : FCC 47CFR §2.1091

This report shall not be reproduced except in full, without the written approval of STS, this document only be altered or revised by STS, personal only, and shall be noted in the revision of the document.

Date of Test..... :

Date of receipt of test item : 16 Nov. 2021

Date (s) of performance of tests..... : 16 Nov. 2021 ~ 07 Dec. 2021

Date of Issue..... : 07 Dec. 2021

Test Result..... : **Pass**

Testing Engineer :

(Chris Chen)

Technical Manager :

(Sean she)

Authorized Signatory :

(Vita Li)





TABLE OF CONTENTS

1. GENERAL INFORMATION	5
1.1 GENERAL DESCRIPTION OF THE EUT	5
1.2 TEST FACTORY	6
2. FCC 47CFR §2.1091 REQUIREMENT	7
2.1 TEST STANDARDS	7
2.2 LIMIT	7
2.3 EUT OPERATION CONDITION	7
2.4 CLASSIFICATION	7
2.5 TEST RESULT	8



**Revision History**

Rev.	Issue Date	Report No.	Effect Page	Contents
00	07 Dec. 2021	STS2111097H01	ALL	Initial Issue





1. GENERAL INFORMATION

1.1 GENERAL DESCRIPTION OF THE EUT

Product Name	Portable Sausa	
Brand Name	WILLOWYBE	
Model Name	AP	
Series Model	AP01,AP02,AP02,AP03,AP04,AP05,AP06,AP07,AP08,AP09	
Model Difference	The appearance, the color is different	
Product Description	The EUT is Portable Sausa	
	Operation Frequency:	2402~2480 MHz
	Modulation Type:	GFSK
	Antenna gain:	2dBi
	Antenna Designation:	PCB
Power Rating	Input: AC 110V/60Hz	
Hardware Version	AP01	
Software Version	AP01	



1.2 TEST FACTORY

SHENZHEN STS TEST SERVICES CO., LTD

Add. : A 1/F, Building B, Zhuoke Science Park, No.190 Chongqing Road, HepingShequ, Fuyong Sub-District, Bao'an District, Shenzhen, Guang Dong, China

FCC test Firm Registration Number: 625569

IC test Firm Registration Number: 12108A

A2LA Certificate No.: 4338.01





2. FCC 47CFR §2.1091 REQUIREMENT

2.1 TEST STANDARDS

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 ²)
Limits for Occupational / controlled Exposures			
300 - 1500	--	--	F/300
1500 – 100000	--	--	5.0
Limits for General population / Uncontrolled Exposure			
300 - 1500	--	--	F/1500
1500 – 100000	--	--	1.0

F= Frequency in MHz

Friss Formula

Friss 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 the center of radiator in 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.

2.3 EUT OPERATION CONDITION

EUT was enabled to transmit and receive at lowest, middle and highest channels.

2.4 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.



2.5 TEST RESULT

Turn up

Mode	Detector	Turn up Power
GFSK	AV	-3±1dBm

ANT Gain (G)

2402-2480MHz: 2dBi (gain of antenna in linear scale=1.585)

Protocol	Max Turn up Power (dBm)	Max Turn up Power (mW)	ANT Gain(gain of antenna in linear scale)	Power Density (mW/cm ²)	Limit	Result
GFSK	-2	0.631	1.585	0.0002	1	Pass

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