RADIO TEST REPORT

Report No: STS2106119H01

Issued for

ShenZhen Aoni Electronic Industry Co., Ltd.

HongHui Industrial Park,2nd LiuXian Road, Xin'An streets, District 68, Bao'an District, ShenZhen, China

Product Name:	Base station
Brand Name:	N/A
Model Name:	E98C
Series Model:	F882, ES06569G, E98CQ2N, SE HomeBase, E98CX(X=1-9, A-Z, a-z or blank)
FCC ID:	Z63-E98C
Test Standard:	FCC 47CFR §2.1091

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	:	ShenZhen Aoni Electronic Industry Co., Ltd.
Address	:	HongHui Industrial Park,2nd LiuXian Road, Xin'An streets, District 68, Bao'an District, ShenZhen, China
Manufacturer's Name	:	ShenZhen Aoni Electronic Industry Co., Ltd.
Address	:	HongHui Industrial Park,2nd LiuXian Road, Xin'An streets, District 68, Bao'an District, ShenZhen, China

Product Description

Product Name	:	Base station
Brand Name	:	N/A
Model Name	:	E98C
Series Model	:	F882, ES06569G, E98CQ2N, SE HomeBase, E98CX(X=1-9, A-Z, a-z or blank)
Standards	:	FCC 47CFR §2.1091

Date of Test	:	
Date of receipt of test item	:	18 June 2021
Date (s) of performance of tests	:	18 June 2021 ~ 23 June 2021
Date of Issue	:	23 June 2021
Test Result	:	**Pass**

Testing Engineer : Chris Chen

(Chris Chen)

Technical Manager : Sean She

(Sean she)

Authorized Signatory : Vita Li

(Vita Li)

TABLE OF CONTENTS

Revision History

Rev.	Issue Date	Report No.	Effect Page	Contents
00	23 June 2021	STS2106119H01	ALL	Initial Issue

1. GENERAL INFORMATION

1.1 GENERAL DESCRIPTION OF THE EUT

Product Name	Base station
Brand Name	N/A
Model Name	E98C
Series Model	F882, ES06569G, E98CQ2N, SE HomeBase, E98CX(X=1-9, A-Z, a-z or blank)
Model Difference	Only different in model names.
Product Description	The EUT is Base station Operation Frequency: 802.11b/g/n 20: 2412~2462 MHz 802.11n(40MHz):2422~2452MHz Modulation Type: 802.11b(DSSS):CCK,DQPSK,DBPSK 802.11g(OFDM): BPSK,QPSK,16-QAM,64-QAM 802.11n(OFDM): BPSK,QPSK,16-QAM,64-QAM Antenna gain: 3 dBi Antenna Designation: PIFA Antenna
Adapter	Input: 100~240V, 50/60Hz, 0.35A Max Output: DC 5V 2A
Hardware version number	V1.1
Software versionnumber	N/A

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/cm^2

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(dBm)
802.11b	AV	18±1dBm
802.11g	AV	11±1dBm
802.11n(HT20)	AV	13±1dBm
802.11n(HT40)	AV	13±1dBm

ANT Gain (G)

ANT A: 3dBi (gain of antenna in linear scale=1.995)

ANT B: 3dBi (gain of antenna in linear scale=1.995)

MIMO: 6.01dBi (gain of antenna in linear scale=3.990)

Protocol	**Max Turn up power (dBm)**	**Max Turn up power (mW)**	**ANT Gain(gain of antenna in linear scale)**	**Power Density (mW/cm²)**	**Limit (mW/cm²)**	**Result**
802.11b	19	79.43	1.995	0.032	1	Pass
802.11g	12	15.85	1.995	0.006	1	Pass
802.11n(HT20)	14	25.12	3.990	0.020	1	Pass
802.11n(HT40)	14	25.12	3.990	0.020	1	Pass

Note: According to the maximum gain of the antenna and the total output power to the antenna, through calculation, we will know max MPE value 0.032 at distance 20cm. This is less than the limit 1.So SAR testing is not required.

※※※※※END OF THE REPORT※※※※※