



RADIO TEST REPORT

Report No: STS2107039H02

Issued for

Shenzhen Feng Jing Sheng Electronics Technology Co.,Ltd

501, 5 Floor, No 36, Dafu Road, Zhangge community,
Fucheng Street, Longhua District, Shenzhen City,
Gunagdong China.

Product Name:	Bluetooth handsfree car kit
Brand Name:	sunitec
Model Name:	BC945
Series Model:	BC945S, BC945P, BC945SA
FCC ID:	2AWTE- BC945
Test Standard:	FCC 47CFR §2.1091

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Test Report Certification

Applicant's Name..... : Shenzhen Feng Jing Sheng Electronics Technology Co.,Ltd
Address : 501, 5 Floor, No 36, Dafu Road, Zhangge community, Fucheng Street, Longhua District, Shenzhen City, Gunagdong China.
Manufacturer's Name : Shenzhen Feng Jing Sheng Electronics Technology Co.,Ltd
Address : 501, 5 Floor, No 36, Dafu Road, Zhangge community, Fucheng Street, Longhua District, Shenzhen City, Gunagdong China.


Product Description

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Standards..... : FCC 47CFR §2.1091

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Date of Test..... :
Date of receipt of test item..... : 07 July 2021
Date (s) of performance of tests..... : 07 July 2021~ 27 July 2021
Date of Issue..... : 27 July 2021
Test Result..... : **Pass**

Testing Engineer : 

 (Chris Chen)

Technical Manager : 

 (Sean she)

Authorized Signatory : 

 (Vita Li)





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Revision History

Rev.	Issue Date	Report No.	Effect Page	Contents
00	27 July 2021	STS2107039H02	ALL	Initial Issue





1. GENERAL INFORMATION

1.1 GENERAL DESCRIPTION OF THE EUT

Product Name	Bluetooth handsfree car kit	
Brand Name	sunitec	
Model Name	BC945	
Series Model	BC945S, BC945P, BC945SA	
Model Difference	Only different in model name	
Product Description	The EUT is Bluetooth handsfree car kit	
	Operation Frequency:	2402 – 2480 MHz
	Modulation Type:	GFSK(1Mbps), $\pi/4$ -DQPSK(2Mbps), 8DPSK(3Mbps)
	Antenna gain:	0dBi
	Antenna Designation:	PCB Antenna
Adapter	Input: DC12-24V Output:DC5V 500mA	
Battery	Rated Voltage:DC3.7V Charge Limit Voltage: DC 4.2V	
Hardware version number	PCB_BH03_V2.3	
Software version number	98CB78ED_98DC2825	

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

1.3 TEST EQUIPMENT



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			
0.3-3.0	614	1.63	*(100)
3.0-30	1842/f	4.89/f	*(900/f ²)
30-300	61.4	0.163	1.0
300 - 1500	--	--	F/300
1500 – 100000	--	--	5.0
Limits for General population / Uncontrolled Exposure			
0.3-1.34	614	1.63	*(100)
1.34-30	824/f	2.19/f	*(180/f ²)
30-300	27.5	0.073	0.2
300 - 1500	--	--	F/1500
1500 – 100000	--	--	1.0

F= Frequency in MHz, * = Plane-wave equivalent power density.

Friss Formula

Friss 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 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.

Note: The 125KHz limit is the same as the frequency band 0.3-3.0MHz.



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	5±1dBm

ANT Gain (G)

2402-2483.5MHz: 0dBi (gain of antenna in linear scale=1)

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 (mW/c m ²)	Result
GFSK	6	3.9811	1	0.0008	1	Pass

※※※※※END OF THE REPORT※※※※※