

Fangguang Inspection & Testing Co., Ltd. Phone: +86-510-68790033 Web: www.fgtest.cn



RF Exposure Evaluation Declaration

Report No.: S20	2105198538E04
Issue Date:	07-23-2021
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Applicant: Shanghai Ortek Electro	stronics Co., Ltd.	
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Address: No.1 Jiefangdao Road, Bridge 16 Southern, Caoan

Road, Jiading District, Shanghai, China

FCC ID:	2AT62TD-68

Application Type: Certification

Product:	Car Audio
Model No.:	TD-68
Trade Mark:	N/A
FCC Classification:	Digital Transmission System

Spread Spectrum Transmitter (DSS)

Xia /mo **Reviewed By** (Amos Xia) Senior Test Engineer Approved By (Keritγ-Zhou) Engineer Manager

(DTS)

The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standards through the calibration of the equipment and evaluated measurement uncertainty herein.

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Revision History

Report No.	Version	Description	Issue Date
S202105198538E04	Rev. 01	1	07-23-2021



1. PRODUCT INFORMATION

1.1. Equipment Description

Product Name:	Car Audio
Model Name:	TD-68
Additional Model:	N/A
Input Voltage Range:	12V-24V===2A Max
Bluetooth Version:	3.0+4.0
Antenna Type:	PCB Antenna
Antenna Gain:	2.81dBi



2. RF Exposure Evaluation

2.1. Limits

According to FCC 1.1310: 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 1.1307(b)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
2 Marian - California	(i) Limits for	Occupational/Controlled Exp	osure	an a
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
300-1,500			f/300	<6
1,500-100,000			5	<6
	(ii) Limits for Gen	eral Population/Uncontrolled	Exposure	a
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
300-1,500			f/1500	<30
1,500-100,000			1.0	<30

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ABLE	1 10 31	. 13 IU(E)(I)-	LIMITS FOR	WIAXIMUM	PERMISSIBLE	EXPOSURE	(IVIPE)

f = frequency in MHz. * = Plane-wave equivalent power density.

Calculation 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 center of the radiator in cm

Pd is the limit of MPE, 1mW/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.



2.2. Test Result of RF Exposure Evaluation

Product	Car Audio
Test Item	RF Exposure Evaluation

Test Mode	Frequency Band	Maximum PK	Power Density at	Limit
	(MHz)	Output Power	R = 20 cm	(mW/cm ²)
		(dBm)	(mW/cm ²)	
BLE	2402 ~ 2480	-0.78	0.000404	1
BT	2402 ~ 2480	2.01	0.000959	1
Note: /				

CONCULISON:

The Max Power Density at R (20 cm) = 0.000959 mW/cm² < 1mW/cm².

So the EUT complies with the requirement.

- The End