



# FCC TEST REPORT

## FCC ID: 2ABKA-BT25

Product Name	:	Bluetooth Bookshelf Speakers
Model Name	:	BT25 (test model) BT25T,BT16,BT16T,BT12,BT20,BT20T,BT35T, BT36T,BT16T
Brand Name	:	Singing Wood/hPlay/Prosonic/Transonic
Report No.	:	PTC22020800503E-FC01
<b>Prepared for</b>		
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## TEST RESULT CERTIFICATION

Applicant's name : LEADERWAVE ELECTRONICS (H.K) LTD

Address : RM811,HENG NGAI JEWELRY CENTER,4 HOKYUEN STREET  
EAST,HUNGHOM,KOWLOON,HONG KONG

Manufacture's name : Dongguan QingXi Leaderwave Electronics Technology Company  
Limited

Address : 3RD.INDUSTRIAL.DISTRICT.QINGXI .TOWN,DONGGUAN,  
GUANGDONG,CHINA

Product name : Bluetooth Bookshelf Speakers

Model name : BT25 (test model)  
BT25T,BT16,BT16T,BT12,BT20,BT20T,BT35T,  
BT36T,BT16T

Test procedure : KDB 447498 D01 General RF Exposure Guidance v06

Test Date : Feb. 15 ,2022 to Mar. 15 ,2022

Date of Issue : Mar. 15 ,2022

Test Result : Pass

This device described above has been tested by PTS, and 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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Test Engineer:

Handwritten signature of Abel Yu in black ink.

Abel Yu / Engineer

Technical Manager:

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Wu Weimin / Manager



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## 2 Test Summary

Test Items	Test Requirement	Result
Maximum Permissible Exposure (Exposure of Humans to RF Fields)	1.1307(b)(1)	PASS
Remark:		
N/A: Not Applicable		



### 3 General Information

#### 3.1 General Description of E.U.T.

Product Name	:	Bluetooth Bookshelf Speakers
Model Name	:	BT25 (test model) BT25T,BT16,BT16T,BT12,BT20,BT20T,BT35T, BT36T,BT16T
Bluetooth Version	:	BT 5.1 BDR+EDR
Operating frequency	:	2402-2480MHz
Numbers of Channel	:	79 channels
Antenna Type	:	PCB Antenna
Antenna Gain	:	2 dBi
Type of Modulation	:	GFSK, $\pi/4$ -DQPSK,8DPSK For DSS
Power supply	:	Adapter model:KSAS051800300M2 Input: 100-240V~,50/60Hz Output:DC 18V,3A
Hardware Version	:	AC6951C
Software Version	:	V.1.3



## 4 RF Exposure

Test Requirement : FCC Part 1.1307(b)(1)

Evaluation Method : FCC Part 2.1091

### 4.1 Requirements

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 levels in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.2 m normally can be maintained between the user and the device.

### 4.2 The procedures / limit

(A) Limits for Occupational / Controlled Exposure

Frequency Range	Electric Field	Magnetic Field	Power Density (S)	Averaging Time
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842 / f	4.89 / f	(900 / f)*	6
30-300	61.4	0.163	1.0	6
300-1500			F/300	6
1500-100,000			5	6

(B) Limits for General Population / Uncontrolled Exposure

Frequency Range	Electric Field	Magnetic Field	Power Density (S)	Averaging Time
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100,000			1.0	30

Note: f = frequency in MHz ; \*Plane-wave equivalent power density



### 4.3 MPE Calculation Method

$$E \text{ (V/m)} = \frac{\sqrt{30 \times P \times G}}{d} \qquad \text{Power Density: } Pd \text{ (W/m}^2\text{)} = \frac{E^2}{377}$$

E = Electric field (V/m)

P = Peak RF output power (W)

G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to

$$Pd = \frac{30 \times P \times G}{377 \times d^2}$$

From the peak EUT RF output power, the minimum mobile separation distance, d=0.2m, as well as the gain of the used antenna, the RF power density can be obtained

### 4.4 Test Result

Item	Antenna Gain (numeric)	Max. Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (mW/cm <sup>2</sup> )	Limit of Power Density (mW/cm <sup>2</sup> )	Result
BT	1.58	1.268	1.34	-0.000421	1	Pass

**\*\*\*\*\*THE END REPORT\*\*\*\*\***