



FCC TEST REPORT

FCC ID:2ABKA-BT27

Product	:	Bluetooth Bookshelf Speakers
Model Name	:	BT27(test model) BT30,BT35,BT40,BT30T,BT40T,BT41,BT42
Brand	:	Singing Wood/hPlay/Prosonic/Transonic
Report No.	:	PTC22020800502E-FC02
Prepared for		
LEADERWAVE ELECTRONICS (H.K) LTD		
RM811,HENG NGAI JEWELRY CENTER,4 HOKYUEN STREET EAST,HUNGHOM,KOWLOON,HONG KONG		
Prepared by		
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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,HUNG HOM,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 : BT27(test model)
BT30,BT35,BT40,BT30T,BT40T,BT41,BT42

Test procedure : KDB 447498 D01 General RF Exposure Guidance v06

Test Date : Mar.1, 2022 to Mar.22, 2022

Date of Issue : Mar.22, 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:

A handwritten signature in black ink, appearing to read 'Abel Yu'.

Abel Yu / Engineer

Technical Manager:

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Wu Weimin /Manager



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Report No.: PTC22020800502E-FC02

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	:	BT27
Additional model	:	BT30,BT35,BT40,BT30T,BT40T,BT41,BT42 Note:The line scheme is the same, and all models have the same shape and size. except for the 1. BT30: AUX+ fiber + coaxial function; 2. BT27: No AUX+ fiber + coaxial function,BT35,BT40,BT30T,BT40T,BT41,BT42 with same BT27.
Specification	:	BT 5.1 BDR+EDR
Operation Frequency	:	2402-2480MHz
Number of Channel	:	79 channels for BDR+EDR
Type of Modulation	:	GFSK, $\pi/4$ -DQPSK,8DPSK For DSS
Antenna installation	:	PCB antenna
Antenna Gain	:	2dBi
Rated Power Supply	:	Adapter:KSAS051800300M2 Input: AC100~240V,50/60Hz Output:DC18/3A
Test Power Supply	:	AC 120V/60Hz
Hardware Version	:	N/A
Software Version	:	N/A



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

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

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

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

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 ²)	Limit of Power Density (mW/cm ²)	Result
EDR	1.58	-1.66	0.68234	0.000215	1	Pass

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