# FCC TEST REPORT

# FCC ID:2ABKA-BT27

| | | |
|---|---|---|
| Product | : | Bluetooth Bookshelf Speakers |
| Model Name | : | BT27(test model)<br>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,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 | : | BT27(test model)<br>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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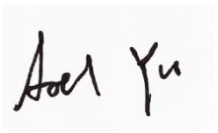
Test Engineer:



Abel Yu / Engineer

Technical Manager:

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 | : | BT27 |
| Additional model | : | BT30,BT35,BT40,BT30T,BT40T,BT41,BT42<br>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;<br>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, Π/4-DQPSK,8DPSK For DSS |
| Antenna installation | : | PCB antenna |
| Antenna Gain | : | 2dBi |
| Rated Power Supply | : | Adapter:KSAS051800300M2<br>Input: AC100~240V,50/60Hz<br>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 (V/m) = $\frac{\sqrt{30 \times P \times G}}{d}$ Power Density: Pd (W/m²) = $\frac{E^2}{377}$

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/cm2) | Limit of Power Density (mW/cm2) | Result |
|---|---|---|---|---|---|---|
| EDR | 1.58 | -1.66 | 0.68234 | 0.000215 | 1 | Pass |

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