# TEST REPORT

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|---|---|---|
| **Product Name** | **:** | **Philips Soundbar Speaker** |
| **Model Number** | **:** | **TAB4208/12, TAB4208/37, TAB4208/61, TAB4208/77, TAB4268/37, TAB4268/yy, TAB4208/yy( yy=00-99 or Nil, for country code)** |
| **FCC ID** | **:** | **2AR2STAB4208** |

| | | |
|---|---|---|
| Prepared for | : | MMD Hong Kong Holding Limited |
| Address | : | Units 1208-11,12th Floor,C-Bons International Center,108 Wai Yip Street, Kwun Tong，Kowloon, Hong Kong |
| Prepared by | : | EMTEK (SHENZHEN) CO., LTD. |
| Address | : | Building 69, Majialong Industry Zone, Nanshan District, Shenzhen, Guangdong, China<br><br>Tel: (0755) 26954280<br>Fax: (0755) 26954282 |

| | | |
|---|---|---|
| Report Number | : | ENS2401030176W00602R |
| Date(s) of Tests | : | October 17, 2023 to January 04, 2024 |
| Date of issue | : | January 04, 2024 |

## Table of Contents

# 1. TEST RESULT CERTIFICATION

| | | |
|---|---|---|
| Applicant | : | MMD Hong Kong Holding Limited |
| Manufacturer | : | MMD Hong Kong Holding Limited |
| Factory | : | Soundlab Technology Company Limited. |
| EUT | : | Philips Soundbar Speaker |
| Model Name | : | TAB4208/12, TAB4208/37, TAB4208/61, TAB4208/77, TAB4268/37, TAB4268/yy, TAB4208/yy( yy=00-99 or Nil, for country code) |
| Trademark | : | PHILIPS, |

Measurement Procedure Used:

| APPLICABLE STANDARDS | |
|---|---|
| **STANDARD** | **TEST RESULT** |
| § 15.247(i), § 2.1093 | **PASS** |

The above equipment was tested by EMTEK(DONGGUAN) CO., LTD. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10 (2013) and the energy emitted by the sample EUT tested as described in this report is in compliance with the requirements of FCC Rules FCC § 15.247(i), § 2.1093.

The test results of this report relate only to the tested sample identified in this report

Date of Test : October 17, 2023 to January 04, 2024

Prepared by : Sewen Guo /Editor

Reviewer : Joe Xia/Supervisor

Approve & Authorized Signer : Lisa Wang/Manager

# Modified History

| Rev. | Summary | Date of Rev. | Report No. |
|---|---|---|---|
| | Original Report | 2023-11-07 | ENS2110170002W00402R |
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| | | | |
| | | | |

## 2. EUT Specification

| Characteristics | Description |
|---|---|
| **Product:** | Philips Soundbar Speaker<br>All product names refer to the same product, but the descriptions are different. |
| **Model Number:** | TAB4208/12, TAB4208/37, TAB4208/61, TAB4208/77, TAB4268/37, TAB4268/yy, TAB4208/yy( yy=00-99 or Nil, for country code)<br>Note: Only the model of TAB4208/37 was tested, since the electrical circuit design, layout, components used and internal wiring are identical, only the color of appearance, model name and country code diferent. |
| **Device Type:** | Bluetooth V5.3 |
| **Data Rate:** | 1Mbps for BT V5.3 GFSK modulation<br>2Mbps for BT V5.3 pi/4-DQPSK modulation |
| **Modulation:** | GFSK modulation for BT V5.3 (1Mbps)<br>pi/4-DQPSK modulation for BT V5.3 (2Mbps) |
| **Operating Frequency Range(s):** | 2402-2480MHz |
| **Number of Channels:** | 79 channels |
| **Transmit Power Max:** | 1.29 dBm（0.001346 W ） |
| **Antenna Type:** | Integral Antenna |
| **Antenna Gain:** | 2.26 dBi |
| **Input Rating:** | AC 100-240V 50/60Hz |
| **Temperature Range:** | 0°C ~ +45°C |

## 3. Test Requirement:

## RF EXPOSURE EVALUATION

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)

Limits for Maximum Permissible Exposure (MPE)

| Frequency Range(MHz) | Electric Field Strength(V/m) | Magnetic Field Strength(A/m) | Power Density($mW/cm^2$) | Average Time |
|---|---|---|---|---|
| (A) Limits for Occupational/Control Exposures | | | | |
| 300-1500 | -- | -- | F/300 | 6 |
| 1500-100000 | -- | -- | 5 | 6 |
| (B) Limits for General Population/Uncontrol Exposures | | | | |
| 300-1500 | -- | -- | F/1500 | 6 |
| 1500-100000 | -- | -- | 1 | 30 |

# 1 Friis transmission formula: Pd= (Pout*G)\ (4*pi*$R^2$)

Where

Pd= Power density in $mW/cm^2$

Pout=output power to antenna in mW

G= Numeric gain of the antenna relative to isotropic antenna

Pi=3.1416

R= distance between observation point and center of the radiator in cm

Pd the limit of MPE, $1mW/cm^2$. If we know the maximum gain of the nd total power input to the antenna, through the calculation, we will know the distance where the MPE limit is reached.

# 4. Measurement Result

Antenna gain: 2.26 dBi

| Transmit Frequency (MHz) | Mode | Output Power (dBm) | E.I.R.P(dBm) | Target Power W/tolerance (dBm) | Max tune up power(dBm) tolerance | Max tuneup power(mW) tolerance | Power Density at R=20cm (mW/cm2) | Limit (mW/cm2) |
|---|---|---|---|---|---|---|---|---|
| 2402 | GFSK | -0.9 | 1.36 | 1±1 | 2 | 1.58 | 0.000539 | 1 |
| 2441 | GFSK | -2.22 | 0.04 | 0±1 | 1 | 1.26 | 0.000428 | 1 |
| 2480 | GFSK | -2.72 | -0.46 | -1±1 | 0 | 1.00 | 0.000340 | 1 |
| 2402 | Π/4-DQPSK | 1.29 | 3.55 | 3±1 | 4 | 2.51 | 0.000855 | 1 |
| 2441 | Π/4-DQPSK | 0.09 | 2.35 | 2±1 | 3 | 2.00 | 0.000679 | 1 |
| 2480 | Π/4-DQPSK | -0.75 | 1.51 | 1±1 | 2 | 1.58 | 0.000539 | 1 |

*** End of Report ***