

## RF Exposure Evaluation Report

**Report Reference No.**..... : **MTEB25080271-H**

**FCC ID**..... : **2BSB7-H008**

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**Applicant's name**..... : **Shenzhen Hui chang Electrical co., Ltd.**

Address..... : Building B4, Hengji Industrial Park, Heyi Community, Shajing  
Sub-district, Bao'an District, Shenzhen City, Guangdong Province,  
China

**Test specification/ Standard**..... : **47 CFR Part 1.1307;47 CFR Part 1.1310**  
**KDB447498D01 General RF Exposure Guidance v06**

TRF Originator..... : Shenzhen Most Technology Service Co., Ltd.

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**Test item description**..... : Home TV Sound Bar

Trade Mark..... :

汇唱 HUICHANG



Model/Type reference..... : H008

Listed Models ..... : H001, H007, H009

Modulation Type..... : GFSK,  $\pi$ /4DQPSK, 8DPSK

Operation Frequency..... : From 2402MHz to 2480MHz

Hardware Version..... : V1.3

Software Version..... : V0.0.3

Rating..... : DC 3.7V by Battery  
DC 5V by USB Port

Result..... : **PASS**

## TEST REPORT

Equipment under Test : Home TV Sound Bar

Model /Type : H008

Listed Models : H001, H007, H009

Remark : Only the model “ H008 ” was tested, Their electrical circuit design, layout, components used and internal wiring are identical, Only the model name and Appearance colour is different.

Applicant : **Shenzhen Hui chang Electrical co., Ltd.**

Address : Building B4, Hengji Industrial Park, Heyi Community, Shajing  
Sub-district, Bao'an District, Shenzhen City, Guangdong Province,  
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Manufacturer : **Shenzhen Hui chang Electrical co., Ltd**

Address : Building B4, Hengji Industrial Park, Heyi Community, Shajing  
Sub-district, Bao'an District, Shenzhen City, Guangdong Province,  
China

|                     |             |
|---------------------|-------------|
| <b>Test Result:</b> | <b>PASS</b> |
|---------------------|-------------|

The test report merely corresponds to the test sample.

It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

1. Revision History

| Revision | Issue Date | Revisions     | Revised By |
|----------|------------|---------------|------------|
| 00       | 2025.08.22 | Initial Issue | Alisa Luo  |
|          |            |               |            |
|          |            |               |            |

## 2. SAR Evaluation

### 2.1 RF Exposure Compliance Requirement

#### 2.1.1 Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v06

##### 4.3.1. Standalone SAR test exclusion considerations

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

#### 2.1.2 Limits

According to FCC Part1.1310: 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 part1.1307(b)

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

| Frequency range (MHz)  | Electric field strength (V/m) | Magnetic field strength (A/m) | Power density (mW/cm <sup>2</sup> ) | Averaging time (minutes) |
|--|-------------------------------|-------------------------------|-------------------------------------|--------------------------|
| <b>(A) Limits for Occupational/Controlled Exposures</b>        |                               |                               |                                     |                          |
| 0.3–3.0 .....  | 614                           | 1.63                          | *(100)                              | 6                        |
| 3.0–30 .....   | 1842/f                        | 4.89/f                        | *(900/f <sup>2</sup> )              | 6                        |
| 30–300 .....   | 61.4                          | 0.163                         | 1.0                                 | 6                        |
| 300–1500 .....   | .....                         | .....                         | f/300                               | 6                        |
| 1500–100,000 .....   | .....                         | .....                         | 5                                   | 6                        |
| <b>(B) Limits for General Population/Uncontrolled Exposure</b> |                               |                               |                                     |                          |
| 0.3–1.34 .....   | 614                           | 1.63                          | *(100)                              | 30                       |
| 1.34–30 .....  | 824/f                         | 2.19/f                        | *(180/f <sup>2</sup> )              | 30                       |
| 30–300 .....   | 27.5                          | 0.073                         | 0.2                                 | 30                       |
| 300–1500 .....   | .....                         | .....                         | f/1500                              | 30                       |
| 1500–100,000 .....   | .....                         | .....                         | 1.0                                 | 30                       |

F= Frequency in MHz

Friis Formula

Friis transmission formula:  $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot R^2)$  Where

$P_d$  = power density in mW/cm<sup>2</sup>

$P_{out}$  = 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

$P_d$  is the limit of MPE, 1 mW/cm<sup>2</sup>. 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.

## 2.1.3 EUT RF Exposure

## EDR

| GFSK             |                         |                         |                       |
|------------------|-------------------------|-------------------------|-----------------------|
| Test channel     | Peak Output Power (dBm) | Tune up tolerance (dBm) | Maximum tune-up Power |
|                  |                         |                         | (dBm)                 |
| Lowest(2402 MHz) | -0.84                   | $-0.84 \pm 1$           | 0.16                  |
| Middle(2441MHz)  | -1.12                   | $-1.12 \pm 1$           | -0.12                 |
| Highest(2480MHz) | -1.51                   | $-1.51 \pm 1$           | -0.51                 |

| $\pi/4$ DQPSK    |                         |                         |                       |
|------------------|-------------------------|-------------------------|-----------------------|
| Test channel     | Peak Output Power (dBm) | Tune up tolerance (dBm) | Maximum tune-up Power |
|                  |                         |                         | (dBm)                 |
| Lowest(2402 MHz) | 0.04                    | $0.04 \pm 1$            | 1.04                  |
| Middle(2441MHz)  | -0.23                   | $-0.23 \pm 1$           | 0.77                  |
| Highest(2480MHz) | -0.67                   | $-0.67 \pm 1$           | 0.33                  |

| 8DPSK            |                         |                         |                       |
|------------------|-------------------------|-------------------------|-----------------------|
| Test channel     | Peak Output Power (dBm) | Tune up tolerance (dBm) | Maximum tune-up Power |
|                  |                         |                         | (dBm)                 |
| Lowest(2402 MHz) | 0.46                    | $0.46 \pm 1$            | 1.46                  |
| Middle(2441MHz)  | 0.21                    | $0.21 \pm 1$            | 1.21                  |
| Highest(2480MHz) | -0.15                   | $-0.15 \pm 1$           | 0.85                  |

| Worst case: 8DPSK |                             |                            |                    |  |       |        |
|-------------------|-----------------------------|----------------------------|--------------------|--|-------|--------|
| Channel           | Maximum tune-up Power (dBm) | Maximum tune-up Power (MW) | Antenna Gain (dBi) | Power Density at R = 20 cm (mW/cm <sup>2</sup> ) | Limit | Result |
| Lowest(2402 MHz)  | 1.46                        | 1.40                       | -0.68              | 0.0002   | 1.0   | Pass   |

Note: 1) Refer to report **MTEB25080271-R** for EUT test Max Conducted average Output Power value.

Note: 2)  $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot R^2) = (1.40 \cdot 0.86) / (4 \cdot 3.1416 \cdot 20^2) = 0.0002$

.....THE END OF REPORT.....