



Report No.: TW2312158E  
Applicant: RADIOSHACK WORLDWIDE CORP.  
Product: SPEAKER BOX  
Model No.: 4001925, MAX-15MDB  
Trademark: RADIOSHACK  
Test Standards: FCC Part 15.249

Test result: It is herewith confirmed and found to comply with the requirements set up by ANSI C63.10 & FCC Part 15 Subpart C, Paragraph 15.249 regulations for the evaluation of electromagnetic compatibility

Approved By

*Terry Tang*

Terry Tang

Manager

Dated: December 28, 2023

**Results appearing herein relate only to the sample tested**  
**The technical reports is issued errors and omissions exempt and is subject to withdrawal at**

### **SHENZHEN TIMEWAY TESTING LABORATORIES**

**Zone C, 1st Floor, Block B, Jun Xiang Da Building, Zhongshan Park Road West,  
Tong Le Village, Nanshan District, Shenzhen, China**

Tel (755) 83448688, Fax (755) 83442996, E-Mail: info@timeway-lab.com





### **Special Statement:**

#### **FCC-Registration No.: 744189**

The EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications commission. The acceptance letter from the FCC is maintained in our files. Registration No.: 744189.

#### **Industry Canada (IC) —Registration No.:5205A**

The EMC Laboratory has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 5205A.

#### **A2LA (Certification Number:5013.01)**

The EMC Laboratory has been accredited by the American Association for Laboratory Accreditation (A2LA). Certification Number:5013.01

#### **CAB identifier: CN0033**

The report refers only to the sample tested and does not apply to the bulk.

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for advertising. The client to whom the report is issued may, however, show or send it, or a certified copy thereof prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES, to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES, will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES, reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



Test Report Conclusion  
Content

|             |                                           |    |
|-------------|-------------------------------------------|----|
| <b>1.0</b>  | <b>General Details</b>                    | 4  |
| 1.1         | Test Lab Details                          | 4  |
| 1.2         | Applicant Details                         | 4  |
| 1.3         | Description of EUT                        | 4  |
| 1.4         | Submitted Sample                          | 4  |
| 1.5         | Test Duration                             | 5  |
| 1.6         | Test Uncertainty                          | 5  |
| 1.7         | Test By                                   | 5  |
| <b>2.0</b>  | <b>List of Measurement Equipment</b>      | 6  |
| <b>3.0</b>  | <b>Technical Details</b>                  | 7  |
| 3.1         | Summary of Test Results                   | 7  |
| 3.2         | Test Standards                            | 7  |
| <b>4.0</b>  | <b>EUT Modification</b>                   | 7  |
| <b>5.0</b>  | <b>Power Line Conducted Emission Test</b> | 8  |
| 5.1         | Schematics of the Test                    | 8  |
| 5.2         | Test Method and Test Procedure            | 8  |
| 5.3         | Configuration of the EUT                  | 8  |
| 5.4         | EUT Operating Condition                   | 9  |
| 5.5         | Conducted Emission Limit                  | 9  |
| 5.6         | Test Result                               | 9  |
| <b>6.0</b>  | <b>Radiated Emission test</b>             | 12 |
| 6.1         | Test Method and Test Procedure            | 12 |
| 6.2         | Configuration of the EUT                  | 13 |
| 6.3         | EUT Operation Condition                   | 13 |
| 6.4         | Radiated Emission Limit                   | 13 |
| 6.5         | Test Result                               | 15 |
| <b>7.0</b>  | <b>Band Edge</b>                          | 23 |
| 7.1         | Test Method and Test Procedure            | 23 |
| 7.2         | Radiated Test Setup                       | 23 |
| 7.3         | Configuration of the EUT                  | 23 |
| 7.4         | EUT Operating Condition                   | 23 |
| 7.5         | Band Edge Limit                           | 23 |
| 7.6         | Band Edge Test Result                     | 24 |
| <b>8.0</b>  | <b>Antenna Requirement</b>                | 28 |
| <b>9.0</b>  | <b>20dB bandwidth measurement</b>         | 29 |
| <b>10.0</b> | <b>FCC ID Label</b>                       | 36 |
| <b>11.0</b> | <b>Photo of Test Setup and EUT View</b>   | 37 |

The report refers only to the sample tested and does not apply to the bulk.

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for advertising. The client to whom the report is issued may, however, show or send it, or a certified copy thereof prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES, to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES, will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES, reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



## 1.0 General Details

### 1.1 Test Lab Details

Name: SHENZHEN TIMEWAY TESTING LABORATORIES.  
Address: Zone C, 1st Floor, Block B, Jun Xiang Da Building, Zhongshan Park Road West, Tong Le Village, Nanshan District, Shenzhen, China  
Telephone: (755) 83448688  
Fax: (755) 83442996  
Site on File with the Federal Communications Commission – United States  
Registration Number: 744189  
For 3m Anechoic Chamber

### 1.2 Applicant Details

Applicant: RADIOSHACK WORLDWIDE CORP.  
Address: Millennium Tower, 18th floor Paseo General Escalon Number 3675 Col. Escalon, San Salvador, El Salvador

### 1.3 Description of EUT

Product: SPEAKER BOX  
Manufacturer: MAXTRONIX CO., LTD.  
Address: NO.12, HEXIANG ROAD, WUJIN ECONOMIC DEVELOPMENT ZONE, CHANGZHOU, JIANGSU, CHINA  
Trademark: RADIOSHACK  
Model Number: 4001925  
Additional Model Name: MAX-15MDB  
Rating: Input: AC100-240V~, 50/60Hz, 190mA  
Battery: DC12V, 5AH Lead-acid battery  
Serial No.: MS400XXXX20231205115B  
Hardware Version: 4001925-V1.1  
Software Version: 4001925-V1.1  
Operation Frequency: 2402-2480MHz  
Modulation Type: GFSK,  $\pi/4$ DQPSK  
Number of Channels: 79  
Channel Separation: 1MHz  
Antenna Designation: PCB antenna with gain -0.58dBi maximum (Get from the antenna specification)

### 1.4 Submitted Sample: 2 Samples

The report refers only to the sample tested and does not apply to the bulk.

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for advertising. The client to whom the report is issued may, however, show or send it, or a certified copy thereof prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES, to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES, will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES, reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



1.5 Test Duration

2023-12-15 to 2023-12-28

1.6 Test Uncertainty

Conducted Emissions Uncertainty =3.6dB

Radiated Emissions below 1GHz Uncertainty =4.7dB

Radiated Emissions above 1GHz Uncertainty =6.0dB

Conducted Power Uncertainty =6.0dB

Occupied Channel Bandwidth Uncertainty =5%

Conducted Emissions Uncertainty =3.6dB

Note: The measurement uncertainty is for coverage factor of  $k=2$  and a level of confidence of 95%.

1.7 Test Engineer

The sample tested by

Print Name: Andy Xing



The report refers only to the sample tested and does not apply to the bulk.

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for advertising. The client to whom the report is issued may, however, show or send it, or a certified copy thereof prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES, to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES, will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES, reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



| 2.0 Test Equipment |              |                  |              |              |            |
|--------------------|--------------|------------------|--------------|--------------|------------|
| Instrument Type    | Manufacturer | Model            | Serial No.   | Date of Cal. | Due Date   |
| ESPI Test Receiver | R&S          | ESPI 3           | 100379       | 2023-07-14   | 2024-07-13 |
| LISN               | R&S          | EZH3-Z5          | 100294       | 2023-07-14   | 2024-07-13 |
| LISN               | R&S          | EZH3-Z5          | 100253       | 2023-07-14   | 2024-07-13 |
| Impuls-Begrenzer   | R&S          | ESH3-Z2          | 100281       | 2023-07-14   | 2024-07-13 |
| Loop Antenna       | EMCO         | 6507             | 00078608     | 2022-07-18   | 2025-07-17 |
| Spectrum           | R&S          | FSIQ26           | 100292       | 2023-07-14   | 2024-07-13 |
| Horn Antenna       | A-INFO       | LB-180400-KF     | J211060660   | 2022-07-18   | 2025-07-17 |
| Horn Antenna       | R&S          | BBHA 9120D       | 9120D-631    | 2022-07-18   | 2024-07-17 |
| Power meter        | Anritsu      | ML2487A          | 6K00003613   | 2023-07-14   | 2024-07-13 |
| Power sensor       | Anritsu      | MA2491A          | 32263        | 2023-07-14   | 2024-07-13 |
| Bilog Antenna      | Schwarebeck  | VULB9163         | 9163/340     | 2022-07-18   | 2025-07-17 |
| 9*6*6 Anechoic     | --           | --               | N/A          | 2022-07-26   | 2025-07-25 |
| EMI Test Receiver  | RS           | ESVB             | 826156/011   | 2023-07-14   | 2024-07-13 |
| EMI Test Receiver  | RS           | ESCS 30          | 834115/006   | 2023-07-14   | 2024-07-13 |
| Spectrum           | HP/Agilent   | E4407B           | MY50441392   | 2023-07-14   | 2024-07-13 |
| Spectrum           | RS           | FSP              | 1164.4391.38 | 2023-07-14   | 2024-07-13 |
| RF Cable           | Zhengdi      | ZT26-NJ-NJ-8M/FA | --           | 2023-07-14   | 2024-07-13 |
| RF Cable           | Zhengdi      | 7m               | --           | 2023-07-14   | 2024-07-13 |
| Pre-Amplifier      | Schwarebeck  | BBV9743          | #218         | 2023-07-14   | 2024-07-13 |
| Pre-Amplifier      | HP/Agilent   | 8449B            | 3008A00160   | 2023-07-14   | 2024-07-13 |
| LISN               | SCHAFFNER    | NNB42            | 00012        | 2023-07-14   | 2024-07-13 |
| ESPI Test Receiver | R&S          | ESPI 3           | 100379       | 2023-07-14   | 2024-07-13 |
| LISN               | R&S          | EZH3-Z5          | 100294       | 2023-07-14   | 2024-07-13 |

## 2.2 Automation Test Software

### For Conducted Emission Test

| Name   | Version           |
|--------|-------------------|
| EZ-EMC | Ver.EMC-CON 3A1.1 |

### For Radiated Emissions

| Name                                            | Version |
|-------------------------------------------------|---------|
| EMI Test Software BL410-EV18.91                 | V18.905 |
| EMI Test Software BL410-EV18.806 High Frequency | V18.06  |

The report refers only to the sample tested and does not apply to the bulk.

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for advertising. The client to whom the report is issued may, however, show or send it, or a certified copy thereof prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES, to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES, will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES, reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



### 3.0 Technical Details

#### 3.1 Summary of test results

| The EUT has been tested according to the following specifications: |                               |        |          |
|--------------------------------------------------------------------|-------------------------------|--------|----------|
| Standard                                                           | Test Type                     | Result | Notes    |
| FCC Part 15, Paragraph 15.203                                      | Antenna Requirement           | Pass   | Complies |
| FCC Part 15, Paragraph 15.207                                      | Conducted Emission Test       | Pass   | Complies |
| FCC Part 15 Subpart C Paragraph 15.249(a) & 15.249(b) Limit        | Field Strength of Fundamental | Pass   | Complies |
| FCC Part 15, Paragraph 15.209                                      | Radiated Emission Test        | Pass   | Complies |
| FCC Part 15 Subpart C Paragraph 15.249(d) Limit                    | Band Edge Test                | Pass   | Complies |
| FCC Part 15.215(c)                                                 | 20dB bandwidth                | Pass   | Complies |

#### 3.2 Test Standards

FCC Part 15 Subpart C, Paragraph 15.249, ANSI C63.4 :2014 and ANSI C63.10 :2013

#### 4.0 EUT Modification

No modification by SHENZHEN TIMEWAY TESTING LABORATORIES

The report refers only to the sample tested and does not apply to the bulk.

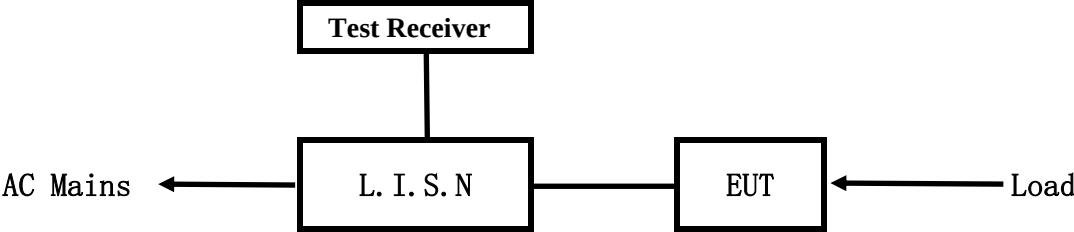
This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for advertising. The client to whom the report is issued may, however, show or send it, or a certified copy thereof prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES, to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES, will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES, reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



5.0 Power Line Conducted Emission Test

5.1 Schematics of the test



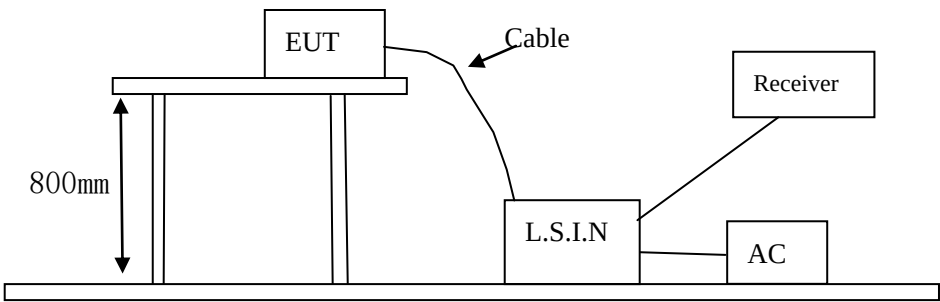
EUT: Equipment Under Test

5.2 Test Method and test Procedure

The EUT was tested according to ANSI C63.10-2013. The Frequency spectrum from 0.15MHz to 30MHz was investigated. The LISN used was 50ohm/50uH as specified by section 5.1 of ANSI C63.10-2013.

Test Voltage: 120V~, 60Hz

Block diagram of Test setup



5.3 Configuration of the EUT

The EUT was configured according to ANSI C63.10-2013. All interface ports were connected to the appropriate peripherals. All peripherals and cables are listed below.

79 channels are provided to the EUT

A. EUT

| Device      | Manufacturer        | Model              | FCC ID        |
|-------------|---------------------|--------------------|---------------|
| SPEAKER BOX | MAXTRONIX CO., LTD. | 4001925, MAX-15MDB | 2BDUR-4001925 |

B. Internal Device

| Device | Manufacturer | Model | FCC ID/DOC |
|--------|--------------|-------|------------|
|--------|--------------|-------|------------|

The report refers only to the sample tested and does not apply to the bulk.  
This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for advertizing. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.  
In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES. reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



|     |  |  |  |
|-----|--|--|--|
| N/A |  |  |  |
|-----|--|--|--|

C.     Peripherals

| Device | Manufacturer | Model | Rating |
|--------|--------------|-------|--------|
| N/A    |              |       |        |

- 5.4     EUT Operating Condition  
Operating condition is according to ANSI C63.10-2013
- A     Setup the EUT and simulators as shown on follow
- B     Enable AF signal and confirm EUT active to normal condition

5.5     Power line conducted Emission Limit according to Paragraph 15.207

| Frequency<br>(MHz) | Limits (dB μ V)  |               |
|--------------------|------------------|---------------|
|                    | Quasi-peak Level | Average Level |
| 0.15 ~ 0.50        | 66.0~56.0*       | 56.0~46.0*    |
| 0.50 ~ 5.00        | 56.0             | 46.0          |
| 5.00 ~ 30.00       | 60.0             | 50.0          |

- Notes:     1. \*Decreasing linearly with logarithm of frequency.
2. The tighter limit shall apply at the transition frequencies

5.6     Test Results:

The report refers only to the sample tested and does not apply to the bulk.

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES. reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



**A: Conducted Emission on Live Terminal (150kHz to 30MHz)**

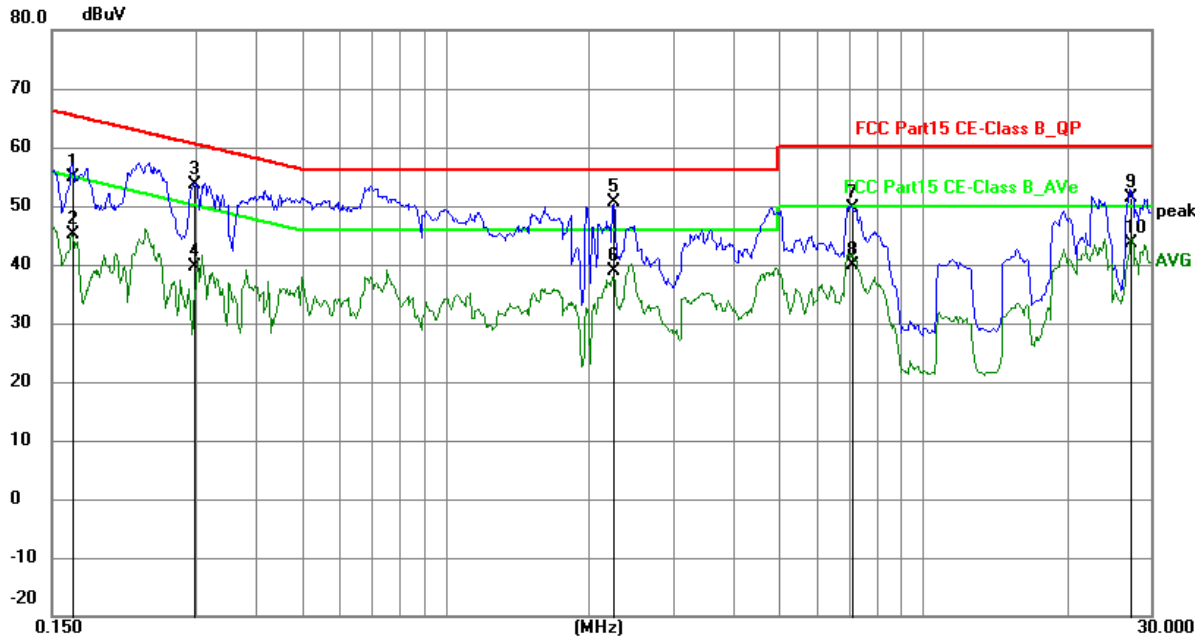
**EUT Operating Environment**

Temperature: 25°C Humidity: 65%RH Atmospheric Pressure: 101 kPa

**EUT set Condition: Communication by BT**

**Results: Pass**

Please refer to following diagram for individual



| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB) | Level (dBuV) | Limit (dBuV) | Margin (dB) | Detector | P/F |
|-----|-----------------|----------------|-------------|--------------|--------------|-------------|----------|-----|
| 1   | 0.1655          | 45.14          | 9.77        | 54.91        | 65.18        | -10.27      | QP       | P   |
| 2   | 0.1655          | 35.41          | 9.77        | 45.18        | 55.18        | -10.00      | AVG      | P   |
| 3   | 0.2985          | 43.92          | 9.76        | 53.68        | 60.28        | -6.60       | QP       | P   |
| 4   | 0.2985          | 29.78          | 9.76        | 39.54        | 50.28        | -10.74      | AVG      | P   |
| 5   | 2.2482          | 40.83          | 9.81        | 50.64        | 56.00        | -5.36       | QP       | P   |
| 6   | 2.2482          | 29.02          | 9.81        | 38.83        | 46.00        | -7.17       | AVG      | P   |
| 7   | 7.0636          | 39.59          | 10.01       | 49.60        | 60.00        | -10.40      | QP       | P   |
| 8   | 7.0636          | 29.82          | 10.01       | 39.83        | 50.00        | -10.17      | AVG      | P   |
| 9   | 27.2073         | 40.29          | 11.13       | 51.42        | 60.00        | -8.58       | QP       | P   |
| 10  | 27.2073         | 32.48          | 11.13       | 43.61        | 50.00        | -6.39       | AVG      | P   |

The report refers only to the sample tested and does not apply to the bulk.

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for advertising. The client to whom the report is issued may, however, show or send it, or a certified copy thereof prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES, to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES, will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES, reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



**B: Conducted Emission on Neutral Terminal (150kHz to 30MHz)**

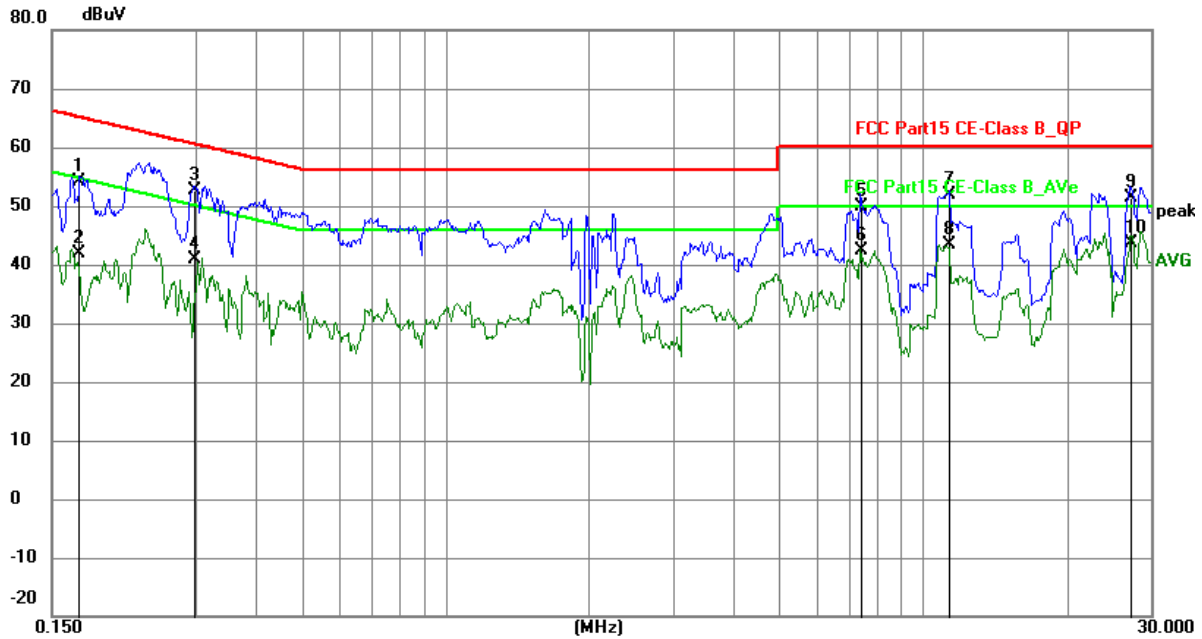
**EUT Operating Environment**

Temperature: 25°C Humidity: 65%RH Atmospheric Pressure: 101 kPa

**EUT set Condition: Communication by BT**

**Results: Pass**

Please refer to following diagram for individual



| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB) | Level (dBuV) | Limit (dBuV) | Margin (dB) | Detector | P/F |
|-----|-----------------|----------------|-------------|--------------|--------------|-------------|----------|-----|
| 1   | 0.1711          | 44.25          | 9.77        | 54.02        | 64.91        | -10.89      | QP       | P   |
| 2   | 0.1711          | 32.01          | 9.77        | 41.78        | 54.91        | -13.13      | AVG      | P   |
| 3   | 0.2982          | 42.94          | 9.76        | 52.70        | 60.29        | -7.59       | QP       | P   |
| 4   | 0.2982          | 31.22          | 9.76        | 40.98        | 50.29        | -9.31       | AVG      | P   |
| 5   | 7.3951          | 39.87          | 10.03       | 49.90        | 60.00        | -10.10      | QP       | P   |
| 6   | 7.3951          | 32.25          | 10.03       | 42.28        | 50.00        | -7.72       | AVG      | P   |
| 7   | 11.3771         | 41.73          | 10.22       | 51.95        | 60.00        | -8.05       | QP       | P   |
| 8   | 11.3771         | 33.11          | 10.22       | 43.33        | 50.00        | -6.67       | AVG      | P   |
| 9   | 27.2073         | 40.29          | 11.13       | 51.42        | 60.00        | -8.58       | QP       | P   |
| 10  | 27.2073         | 32.44          | 11.13       | 43.57        | 50.00        | -6.43       | AVG      | P   |

The report refers only to the sample tested and does not apply to the bulk.

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for advertising. The client to whom the report is issued may, however, show or send it, or a certified copy thereof prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES, to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES, will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES, reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



## 6 Radiated Emission Test

### 6.1 Test Method and test Procedure:

- (1) The EUT was tested according to ANSI C63.10-2013. The radiated test was performed at Timeway EMC Laboratory. This site is on file with the FCC laboratory division, Registration No. 744189
- (2) The EUT, peripherals were put on the turntable which table size is 1m x 1.5 m, table high 0.8 m. All set up is according to ANSI C63.10-2013.
- (3) The frequency spectrum from 9kHz to 25 GHz was investigated. The frequency spectrum is set as follows:

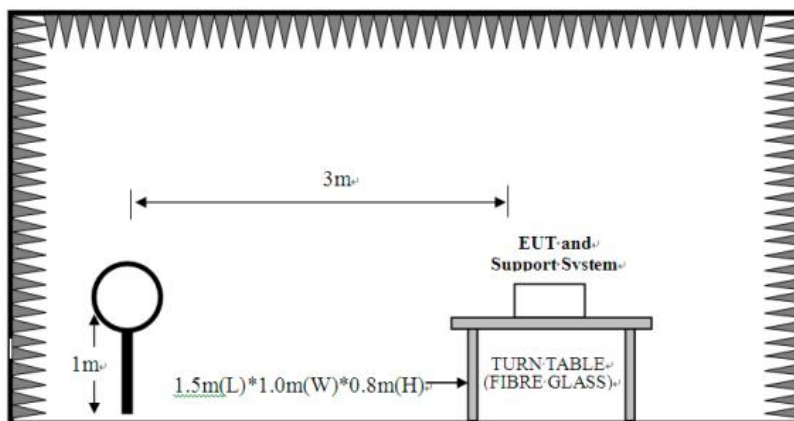
| Frequency    | Detector   | RBW    | VBW    | Value      |
|--------------|------------|--------|--------|------------|
| 9KHz-150KHz  | Quasi-peak | 200Hz  | 600Hz  | Quasi-peak |
| 150KHz-30MHz | Quasi-peak | 9KHz   | 30KHz  | Quasi-peak |
| 30MHz-1GHz   | Quasi-peak | 120KHz | 300KHz | Quasi-peak |
| Above 1GHz   | Peak       | 1MHz   | 3MHz   | Peak       |
|              | Peak       | 1MHz   | 10Hz   | Average    |

(Note: for Fundamental frequency radiated emission measurement, RBW=3MHz, VBW=10MHz).  
Measurements were made at 3 meters.

- (4) The antenna high is varied from 1 m to 4 m high to find the maximum emission for each frequency.
- (5) The antenna polarization: Vertical polarization and Horizontal polarization.

### Block diagram of Test setup

For radiated emissions from 9kHz to 30MHz



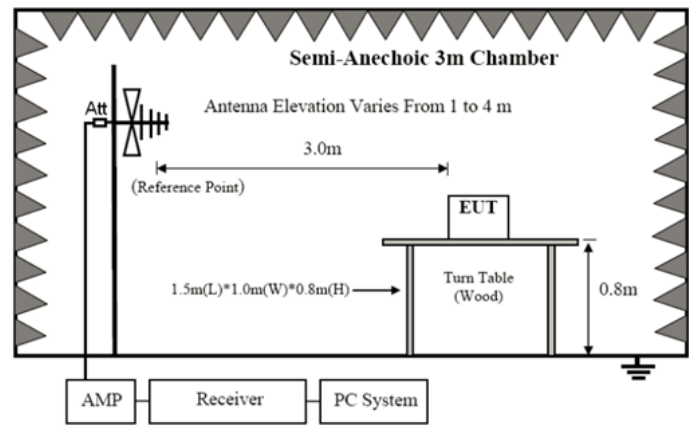
The report refers only to the sample tested and does not apply to the bulk.

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced in its entirety or in part and it may not be used for advertising. The client to whom the report is issued may, however, show or send it, or a certified copy thereof prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES, to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES, will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

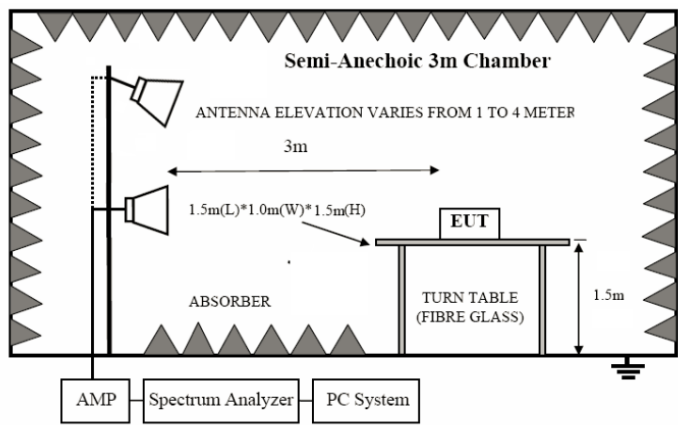
In the event of the improper use of the report, The SHENZHEN TIMEWAY TESTING LABORATORIES, reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



For radiated emissions from 30MHz to1GHz



For radiated emissions above 1GHz



6.2 Configuration of the EUT

Same as section 5.3 of this report

6.3 EUT Operating Condition

Same as section 5.4 of this report.

6.4 Radiated Emission Limit

All emission from a digital device, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strength specified below:

A FCC Part 15 Subpart C Paragraph 15.249(a) Limit

| Fundamental Frequency<br>(MHz) | Field Strength of Fundamental (3m) |        | Field Strength of Harmonics (3m) |        |
|--------------------------------|------------------------------------|--------|----------------------------------|--------|
|                                | mV/m                               | dBuV/m | uV/m                             | dBuV/m |

The report refers only to the sample tested and does not apply to the bulk.  
This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.  
In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES. reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



|             |    |              |            |     |              |           |
|-------------|----|--------------|------------|-----|--------------|-----------|
| 2400-2483.5 | 50 | 94 (Average) | 114 (Peak) | 500 | 54 (Average) | 74 (Peak) |
|-------------|----|--------------|------------|-----|--------------|-----------|

- Note:
1. RF Field Strength (dBuV) = 20 log RF Voltage (uV)
  2. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.
  3. The emission limit in this paragraph is based on measurement instrumentation employing an average detector.

**B. Frequencies in restricted band are complied to limit on Paragraph 15.209.**

| Frequency Range (MHz) | Distance (m) | Field strength (dB $\mu$ V/m)                |
|-----------------------|--------------|----------------------------------------------|
| 0.009-0.490           | 3            | $20\log(2400/F(\text{kHz})) + 40\log(300/3)$ |
| 0.490-1.705           | 3            | $20\log(24000/F(\text{kHz})) + 40\log(30/3)$ |
| 1.705-30              | 3            | 69.5                                         |
| 30-80                 | 3            | 40.0                                         |
| 88-216                | 3            | 43.5                                         |
| 21 -9 0               | 3            | 46.0                                         |
| Above 960             | 3            | 54.0                                         |

- Note:
1. RF Voltage (dBuV) = 20 log RF Voltage (uV)
  2. In the Above Table, the tighter limit applies at the band edges.
  3. Distance refers to the distance in meters between the measuring instrument antenna and the EUT
  4. All scanning using PK detector. And the final emission level was get using QP detector for frequency range from 30-1000MHz.As to 1G-25G, the final emission level got using PK. For fundamental measurement, PK detector used.
  5. The two modulation modes of GFSK and Pi/4D-QPSK were tested. And only the worst case was recorded in the test report. GFSK was the worst case.

The report refers only to the sample tested and does not apply to the bulk.

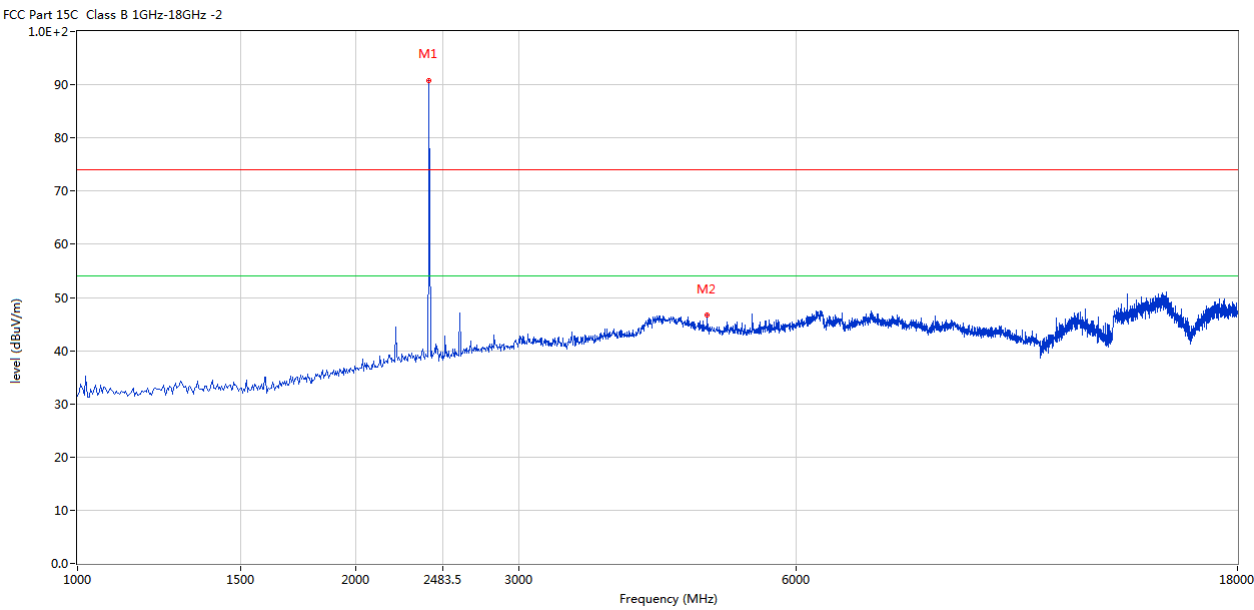
This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report. In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES. reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



6.5 Test result  
A Fundamental & Harmonics Radiated Emission Data

Please refer to the following test plots for details: Low Channel-2402MHz

Horizontal

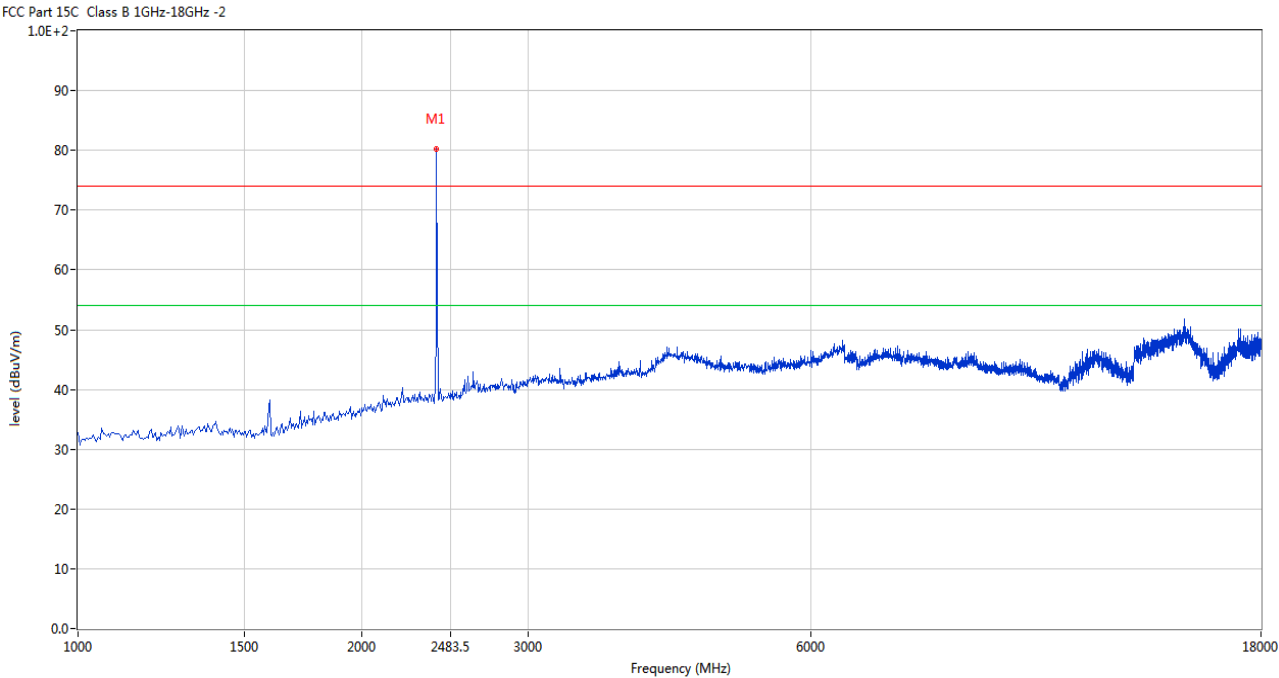


| No. | Frequency (MHz) | Results (dBuV/m) | Factor (dB) | Limit (dBuV/m) | Over Limit (dB) | Detector | Table (o) | Height (cm) | ANT        | Verdict |
|-----|-----------------|------------------|-------------|----------------|-----------------|----------|-----------|-------------|------------|---------|
| 1   | 2402            | 90.84            | -3.57       | 114.0          | -23.16          | Peak     | 280.00    | 100         | Horizontal | Pass    |
| 2   | 4802.799        | 46.64            | 3.12        | 74.0           | -27.36          | Peak     | 296.00    | 100         | Horizontal | Pass    |

The report refers only to the sample tested and does not apply to the bulk.  
This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for advertizing. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.  
In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES. reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



Vertical



| No. | Frequency<br>(MHz) | Results<br>(dBuV/m) | Factor<br>(dB) | Limit<br>(dBuV/m) | Over Limit<br>(dB) | Detector | Table<br>(o) | Height<br>(cm) | ANT      | Verdict |
|-----|--------------------|---------------------|----------------|-------------------|--------------------|----------|--------------|----------------|----------|---------|
| 1   | 2402               | 80.25               | -3.57          | 114.0             | -33.75             | Peak     | 89.00        | 100            | Vertical | Pass    |

The report refers only to the sample tested and does not apply to the bulk.

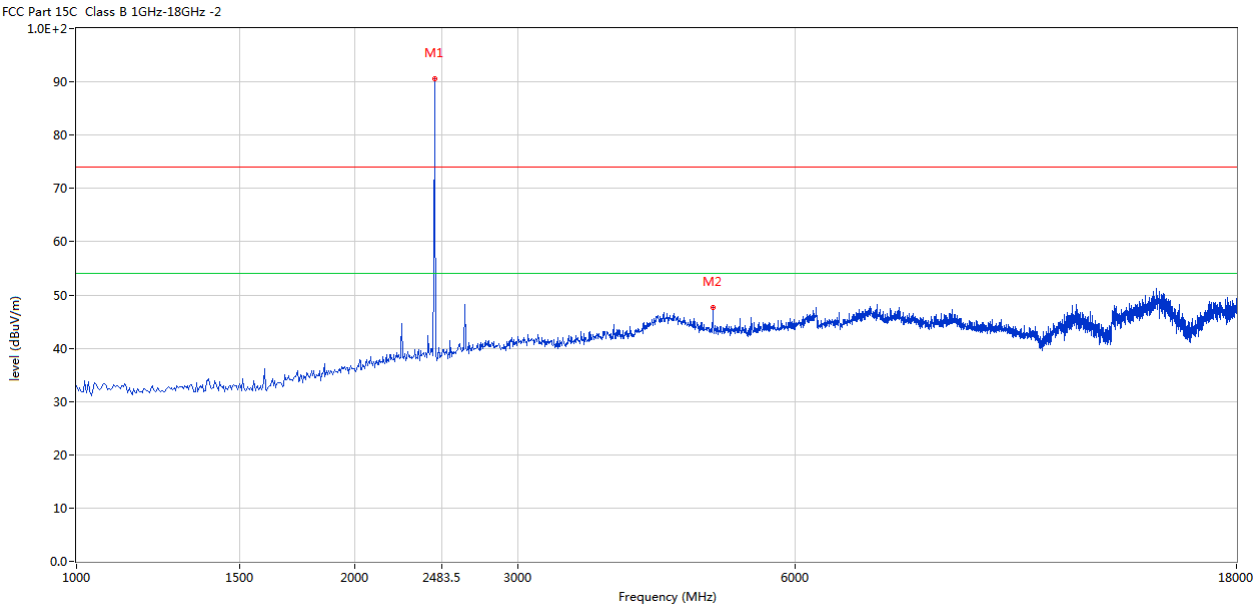
This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for advertizing. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES. reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



Please refer to the following test plots for details: Middle Channel-2441MHz

Horizontal

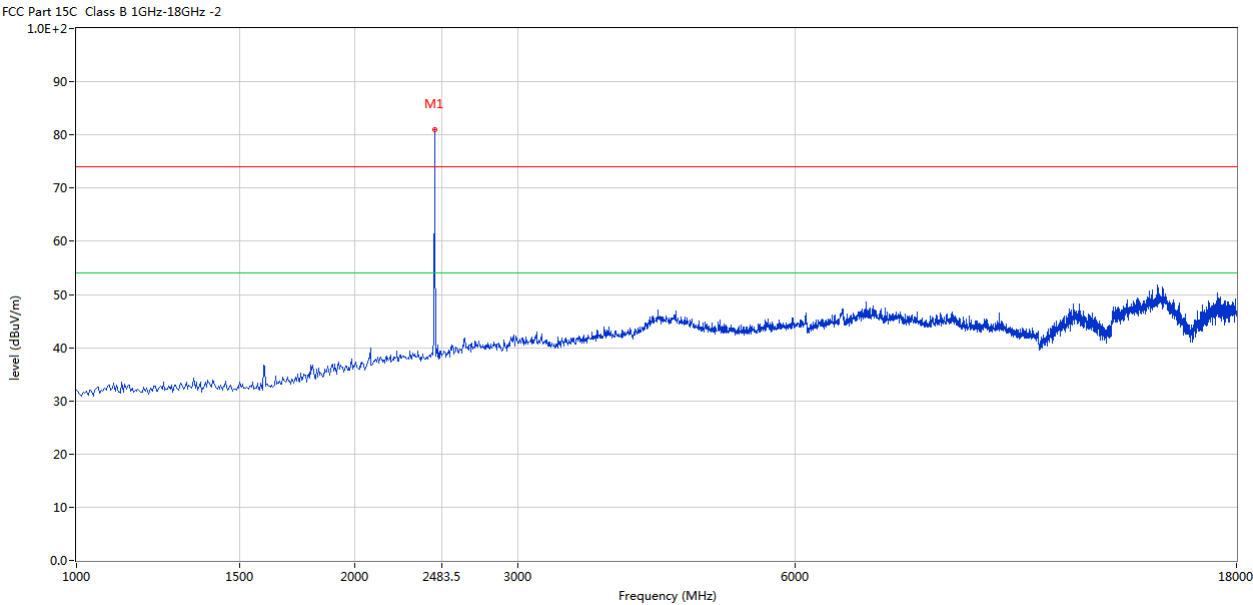


| No. | Frequency<br>(MHz) | Results<br>(dBuV/m) | Factor<br>(dB) | Limit<br>(dBuV/m) | Over Limit<br>(dB) | Detector | Table<br>(o) | Height<br>(cm) | ANT        | Verdict |
|-----|--------------------|---------------------|----------------|-------------------|--------------------|----------|--------------|----------------|------------|---------|
| 1   | 2441               | 90.52               | -3.57          | 114.0             | -23.48             | Peak     | 275.00       | 100            | Horizontal | Pass    |
| 2   | 4883.529           | 47.59               | 3.20           | 74.0              | -26.41             | Peak     | 264.00       | 100            | Horizontal | Pass    |

The report refers only to the sample tested and does not apply to the bulk.  
This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for advertng. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.  
In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES. reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



Vertical



| No. | Frequency (MHz) | Results (dBuV/m) | Factor (dB) | Limit (dBuV/m) | Over Limit (dB) | Detector | Table (o) | Height (cm) | ANT      | Verdict |
|-----|-----------------|------------------|-------------|----------------|-----------------|----------|-----------|-------------|----------|---------|
| 1   | 2441            | 80.89            | -3.57       | 114.0          | -33.11          | Peak     | 346.00    | 100         | Vertical | Pass    |

The report refers only to the sample tested and does not apply to the bulk.

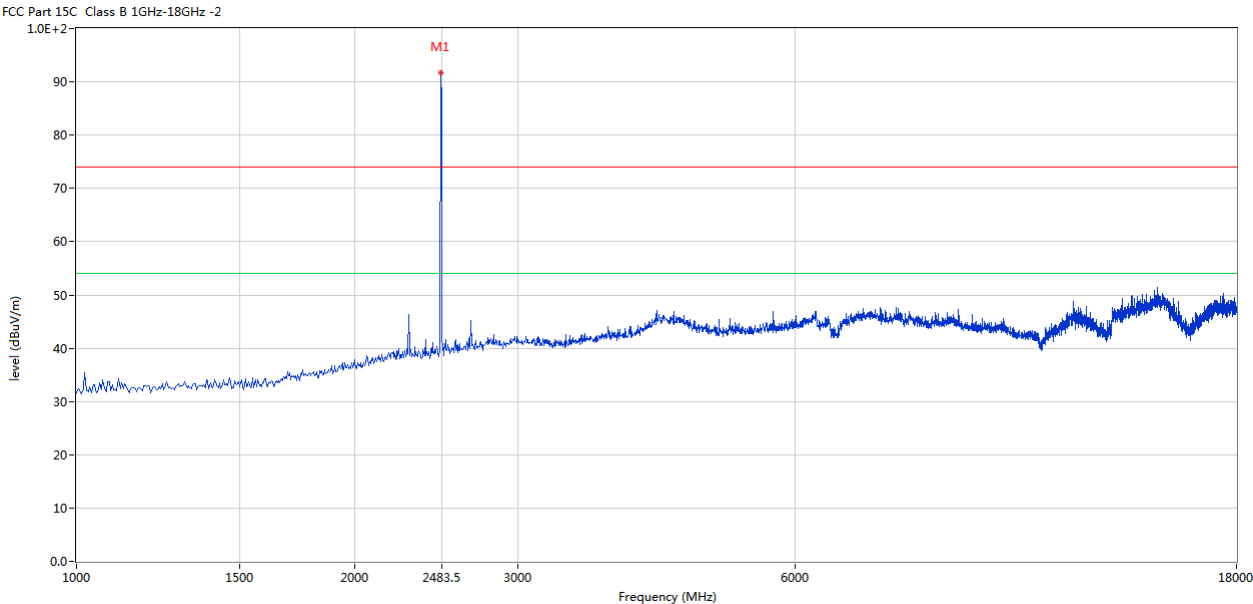
This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES. reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



Please refer to the following test plots for details: High Channel-2480MHz

Horizontal

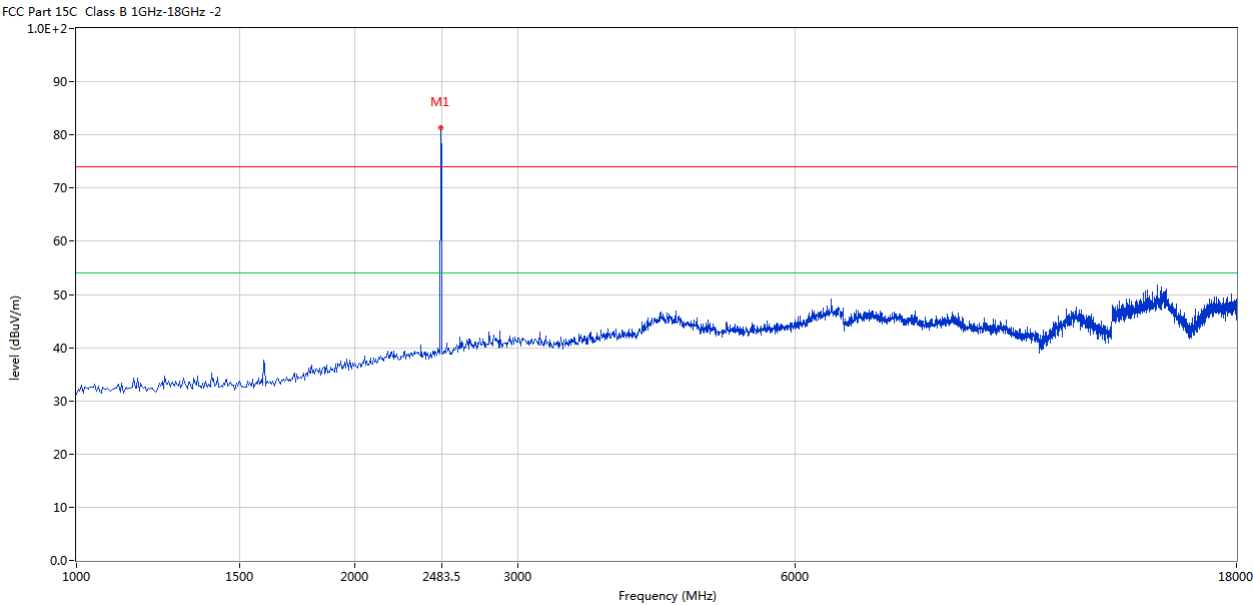


| No. | Frequency<br>(MHz) | Results<br>(dBuV/m) | Factor<br>(dB) | Limit<br>(dBuV/m) | Over Limit<br>(dB) | Detector | Table<br>(o) | Height<br>(cm) | ANT        | Verdict |
|-----|--------------------|---------------------|----------------|-------------------|--------------------|----------|--------------|----------------|------------|---------|
| 1   | 2480               | 91.63               | -3.57          | 114.0             | -22.37             | Peak     | 270.00       | 100            | Horizontal | Pass    |

The report refers only to the sample tested and does not apply to the bulk.  
This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.  
In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES. reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



Vertical



| No. | Frequency<br>(MHz) | Results<br>(dBuV/m) | Factor<br>(dB) | Limit<br>(dBuV/m) | Over Limit<br>(dB) | Detector | Table<br>(o) | Height<br>(cm) | ANT      | Verdict |
|-----|--------------------|---------------------|----------------|-------------------|--------------------|----------|--------------|----------------|----------|---------|
| 1   | 2480               | 81.33               | -3.57          | 114.0             | -32.67             | Peak     | 176.00       | 100            | Vertical | Pass    |

- Note:
- (1) Emission Level = Reading Level + Antenna Factor + Cable Loss-Amplifier
  - (2) Margin=Emission-Limits
  - (3) According to section 15.35(b), the peak limit is 20dB higher than the average limit
  - (4) For test purpose, keep EUT continuous transmitting
  - (5) For emission above 18GHz and Below 30MHz, It is only the floor noise and less than the limit for more than 20dB. No necessary to take down.
  - (6) the measured PK value less than the AV limit.

The report refers only to the sample tested and does not apply to the bulk.  
This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.  
In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES. reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.

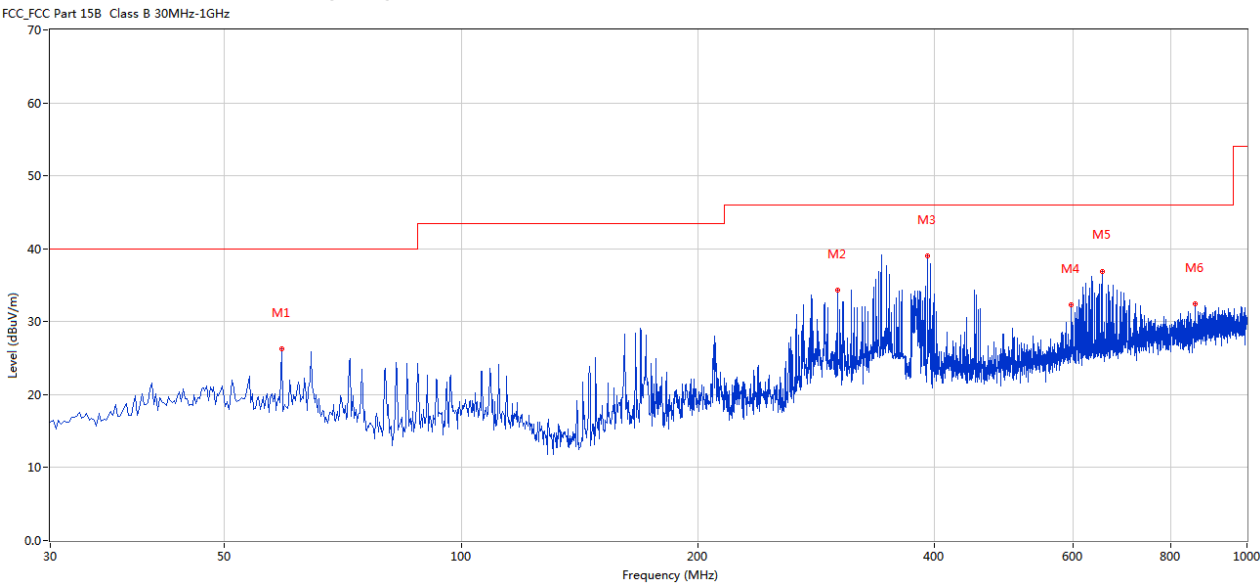


B. General Radiated Emission Data  
Radiated Emission In Horizontal (30MHz----1000MHz)

EUT set Condition: Keep Tx transmitting

Results: Pass

Please refer to following diagram for individual



| No. | Frequency<br>(MHz) | Results<br>(dBuV/m) | Factor<br>(dB) | Limit<br>(dBuV/m) | Margin<br>(dB) | Detector | Table<br>(Degree) | Height<br>(cm) | Antenna    | Verdict |
|-----|--------------------|---------------------|----------------|-------------------|----------------|----------|-------------------|----------------|------------|---------|
| 1   | 59.093             | 26.25               | -12.87         | 40.0              | 13.75          | Peak     | 360.00            | 100            | Horizontal | Pass    |
| 2   | 301.047            | 34.32               | -11.01         | 47.0              | 12.68          | Peak     | 360.00            | 100            | Horizontal | Pass    |
| 3   | 392.447            | 38.96               | -8.92          | 47.0              | 8.04           | Peak     | 360.00            | 100            | Horizontal | Pass    |
| 4   | 597.308            | 32.34               | -5.09          | 47.0              | 14.66          | Peak     | 360.00            | 100            | Horizontal | Pass    |
| 5   | 655.009            | 36.92               | -4.52          | 47.0              | 10.08          | Peak     | 360.00            | 100            | Horizontal | Pass    |
| 6   | 859.143            | 32.47               | -2.35          | 47.0              | 14.53          | Peak     | 360.00            | 100            | Horizontal | Pass    |

The report refers only to the sample tested and does not apply to the bulk.  
This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for advertizing. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.  
In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES. reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.

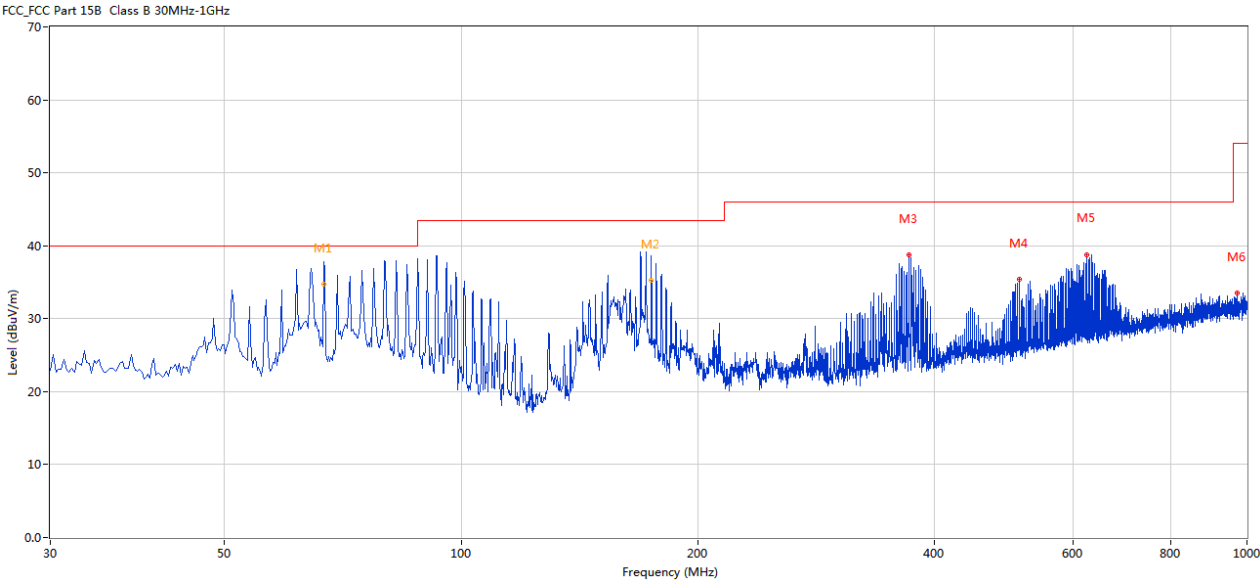


**Radiated Emission In Vertical (30MHz----1000MHz)**

EUT set Condition:   Keep Tx transmitting

**Results:    Pass**

Please refer to following diagram for individual



| No. | Frequency<br>(MHz) | Results<br>(dBuV/m) | Factor<br>(dB) | Limit<br>(dBuV/m) | Margin<br>(dB) | Detector | Table<br>(Degree) | Height<br>(cm) | Antenna  | Verdict |
|-----|--------------------|---------------------|----------------|-------------------|----------------|----------|-------------------|----------------|----------|---------|
| 1*  | 66.851             | 34.76               | -14.24         | 40.0              | 5.24           | QP       | 0.00              | 100            | Vertical | Pass    |
| 2*  | 174.494            | 35.23               | -15.77         | 40.0              | 4.77           | QP       | 257.00            | 100            | Vertical | Pass    |
| 3   | 371.355            | 38.73               | -9.51          | 47.0              | 8.27           | Peak     | 275.00            | 100            | Vertical | Pass    |
| 4   | 513.182            | 35.43               | -6.90          | 47.0              | 11.57          | Peak     | 1.00              | 100            | Vertical | Pass    |
| 5   | 625.916            | 38.79               | -4.89          | 47.0              | 8.21           | Peak     | 236.00            | 100            | Vertical | Pass    |
| 6   | 971.635            | 33.53               | -1.60          | 47.0              | 13.47          | Peak     | 230.00            | 100            | Vertical | Pass    |

The report refers only to the sample tested and does not apply to the bulk.  
This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for advertizing. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.  
In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES. reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.

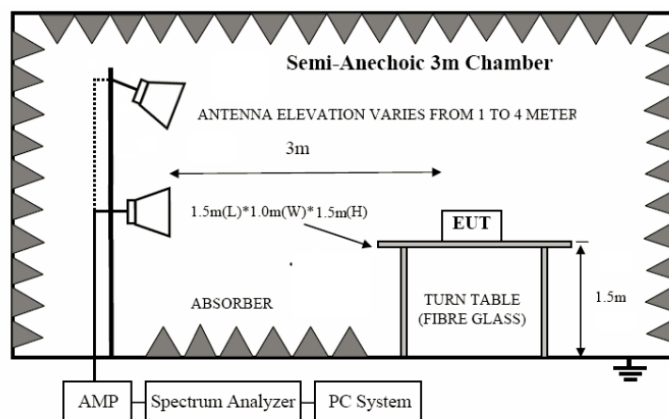


## 7. Band Edge

### 7.1 Test Method and test Procedure:

- (1) The EUT was tested according to ANSI C63.10–2013. The radiated test was performed at Timeway EMC Laboratory. This site is on file with the FCC laboratory division, Registration No. 744189
- (2) Set Spectrum as RBW=1MHz, VBW=3MHz and Peak detector used for PK value. RBW=1MHz, VBW=10Hz and Peak detector used for AV value.
- (3) The antenna high is varied from 1 m to 4 m high to find the maximum emission for each frequency.
- (4) The antenna polarization: Vertical polarization and Horizontal polarization.

### 7.2 Radiated Test Setup



For the actual test configuration, please refer to the related items – Photos of Testing

### 7.3 Configuration of the EUT

Same as section 5.3 of this report

### 7.4 EUT Operating Condition

Same as section 5.4 of this report.

### 7.5 Band Edge Limit

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.

The report refers only to the sample tested and does not apply to the bulk.

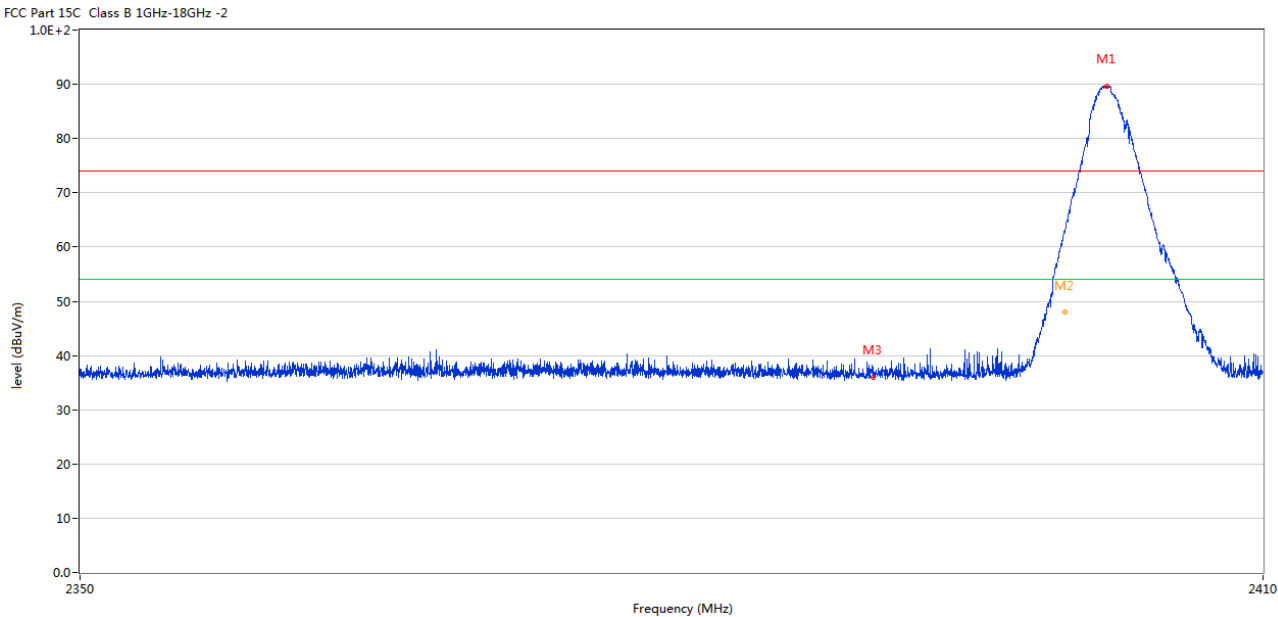
This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced in its entirety or in part and it may not be used for advertising. The client to whom the report is issued may, however, show or send it, or a certified copy thereof prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES, to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES, will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES, reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



7.6 Test Result

|              |                      |              |            |
|--------------|----------------------|--------------|------------|
| Product:     | SPEAKER BOX          | Polarity     | Horizontal |
| Mode         | Keeping Transmitting | Test Voltage | 120V~      |
| Temperature  | 24 deg. C,           | Humidity     | 56% RH     |
| Test Result: | Pass                 | --           | --         |

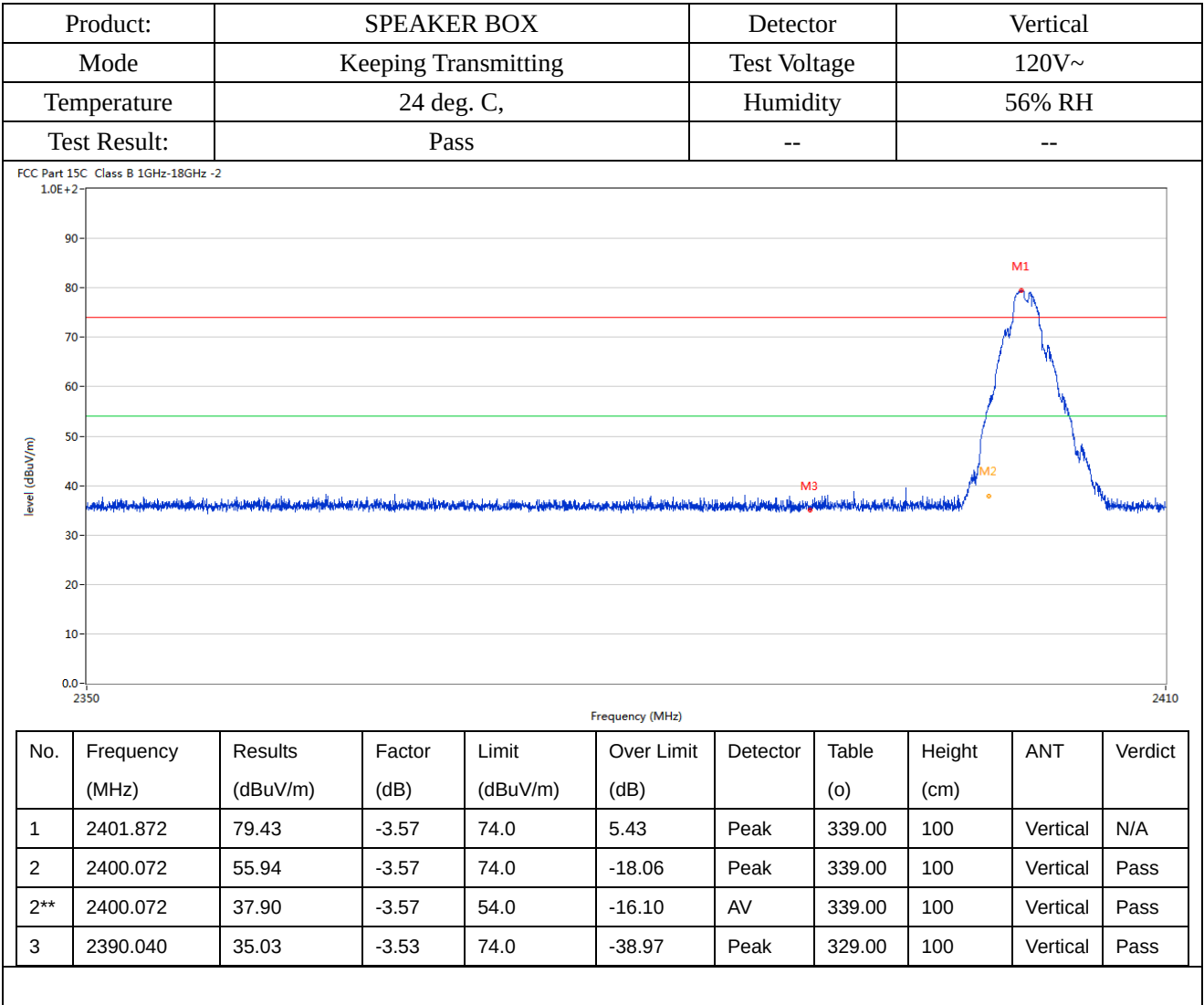


| No. | Frequency (MHz) | Results (dBuV/m) | Factor (dB) | Limit (dBuV/m) | Over Limit (dB) | Detector | Table (o) | Height (cm) | ANT        | Verdict |
|-----|-----------------|------------------|-------------|----------------|-----------------|----------|-----------|-------------|------------|---------|
| 1   | 2401.977        | 90.61            | -3.57       | 74.0           | 16.61           | Peak     | 260.00    | 100         | Horizontal | N/A     |
| 2   | 2400.008        | 61.85            | -3.57       | 74.0           | -12.15          | Peak     | 260.00    | 100         | Horizontal | Pass    |
| 2** | 2400.008        | 47.69            | -3.57       | 54.0           | -6.31           | AV       | 260.00    | 100         | Horizontal | Pass    |
| 3   | 2390.040        | 35.96            | -3.53       | 74.0           | -38.04          | Peak     | 260.00    | 100         | Horizontal | Pass    |

The report refers only to the sample tested and does not apply to the bulk.

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for advertizing. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES. reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



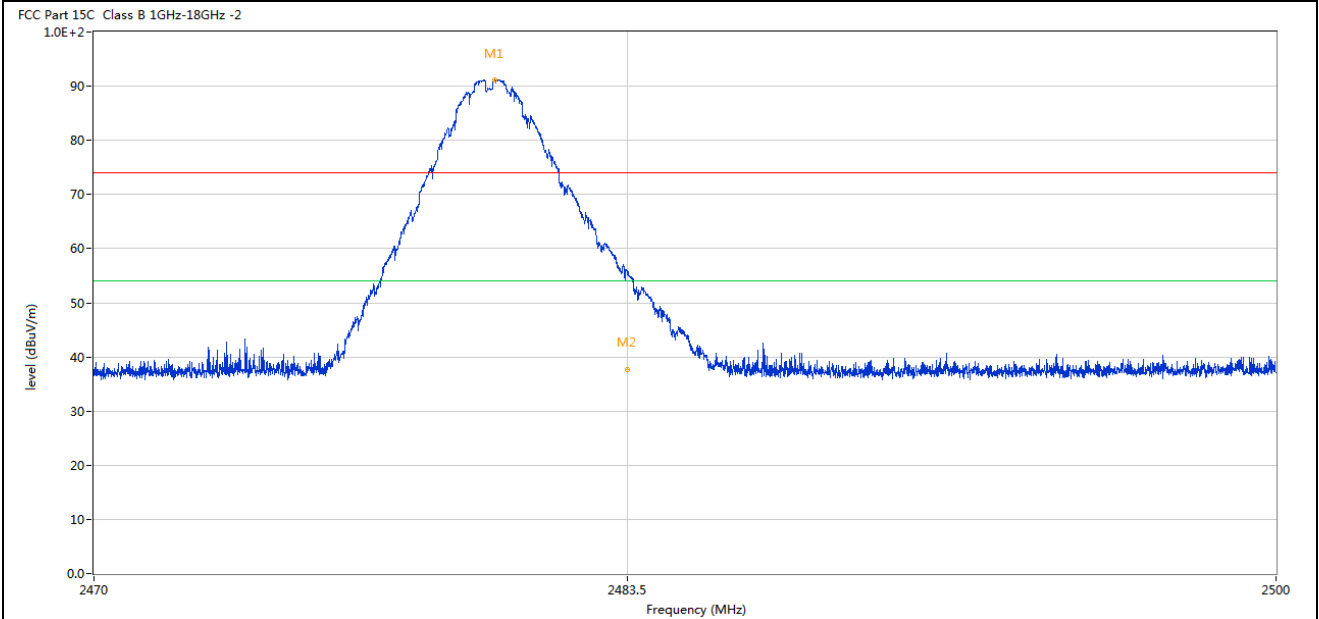
The report refers only to the sample tested and does not apply to the bulk.

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for advertizing. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES. reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



|              |                      |              |            |
|--------------|----------------------|--------------|------------|
| Product:     | SPEAKER BOX          | Polarity     | Horizontal |
| Mode         | Keeping Transmitting | Test Voltage | 120V~      |
| Temperature  | 24 deg. C,           | Humidity     | 56% RH     |
| Test Result: | Pass                 | --           | --         |

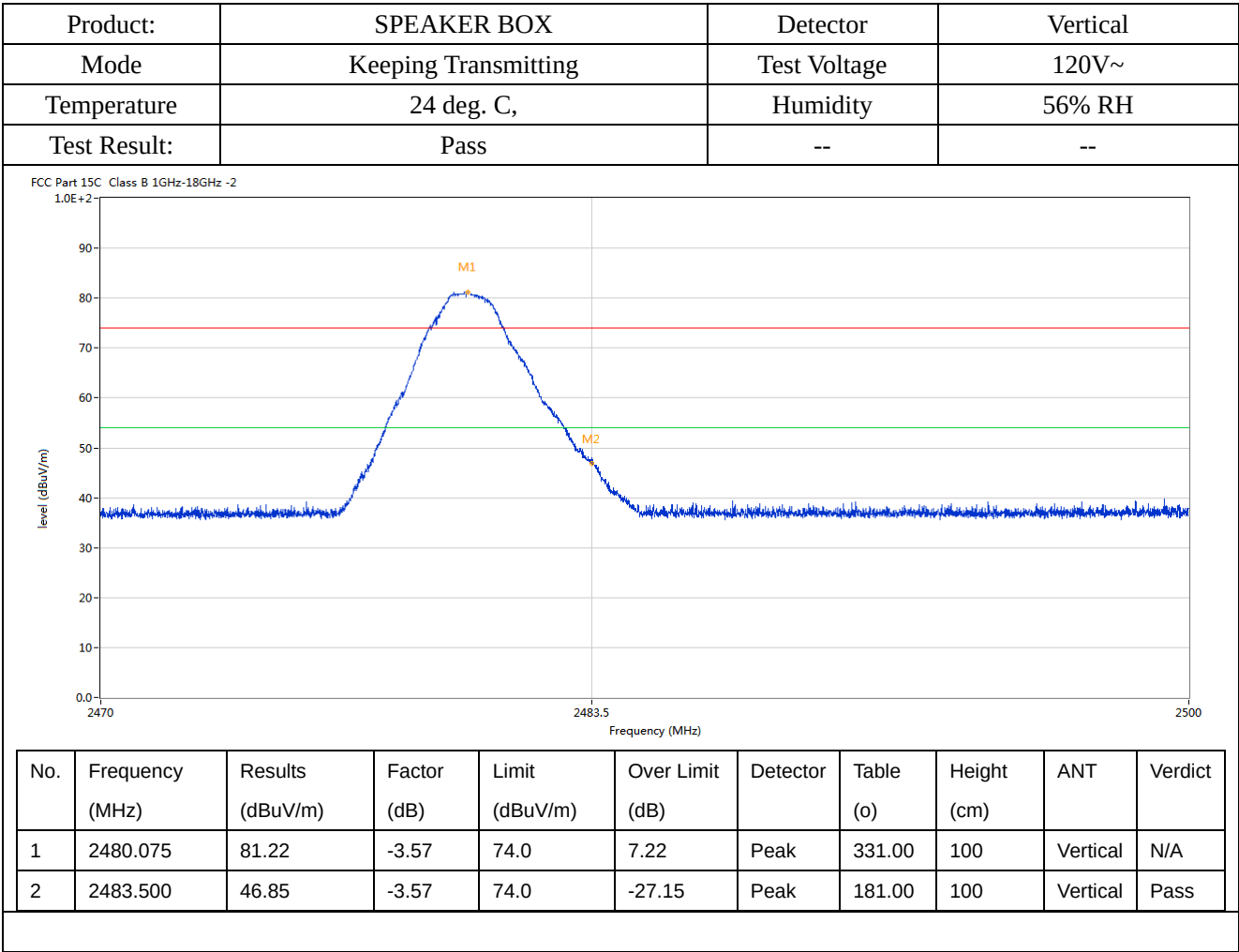


| No. | Frequency (MHz) | Results (dBuV/m) | Factor (dB) | Limit (dBuV/m) | Over Limit (dB) | Detector | Table (o) | Height (cm) | ANT        | Verdict |
|-----|-----------------|------------------|-------------|----------------|-----------------|----------|-----------|-------------|------------|---------|
| 1   | 2480.130        | 91.20            | -3.57       | 74.0           | 17.20           | Peak     | 262.00    | 100         | Horizontal | N/A     |
| 2   | 2483.500        | 55.30            | -3.57       | 74.0           | -18.70          | Peak     | 262.00    | 100         | Horizontal | Pass    |
| 2** | 2483.500        | 37.23            | -3.57       | 54.0           | -16.77          | AV       | 262.00    | 100         | Horizontal | Pass    |

The report refers only to the sample tested and does not apply to the bulk.

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES. reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



Note: 1. The PK emission level less than the AV limit. No necessary to record the AV emission level.

2. The two modulation modes of GFSK and Pi/4D-QPSK were tested. And only the worst case was recorded in the test report. GFSK was the worst case.

The report refers only to the sample tested and does not apply to the bulk.

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for advertizing. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES. reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



## 8.0 Antenna Requirement

### Applicable Standard

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

This product has a PCB antenna with gain -0.58dBi maximum. It fulfills the requirement of this section.

Test Result: Pass

The report refers only to the sample tested and does not apply to the bulk.

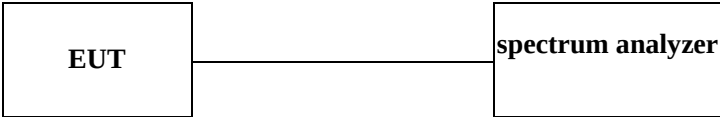
This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for advertising. The client to whom the report is issued may, however, show or send it, or a certified copy thereof prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES, to his customer, supplier or other persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report, the SHENZHEN TIMEWAY TESTING LABORATORIES reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



**9.0 20dB Bandwidth Measurement**

**Test Configuration**



**Test Procedure**

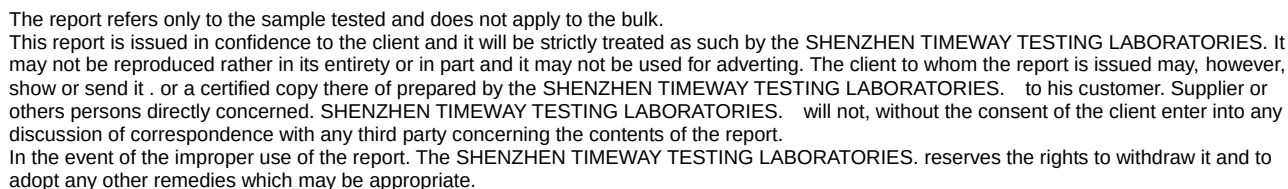
The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 30kHz RBW and 100kHz VBW.

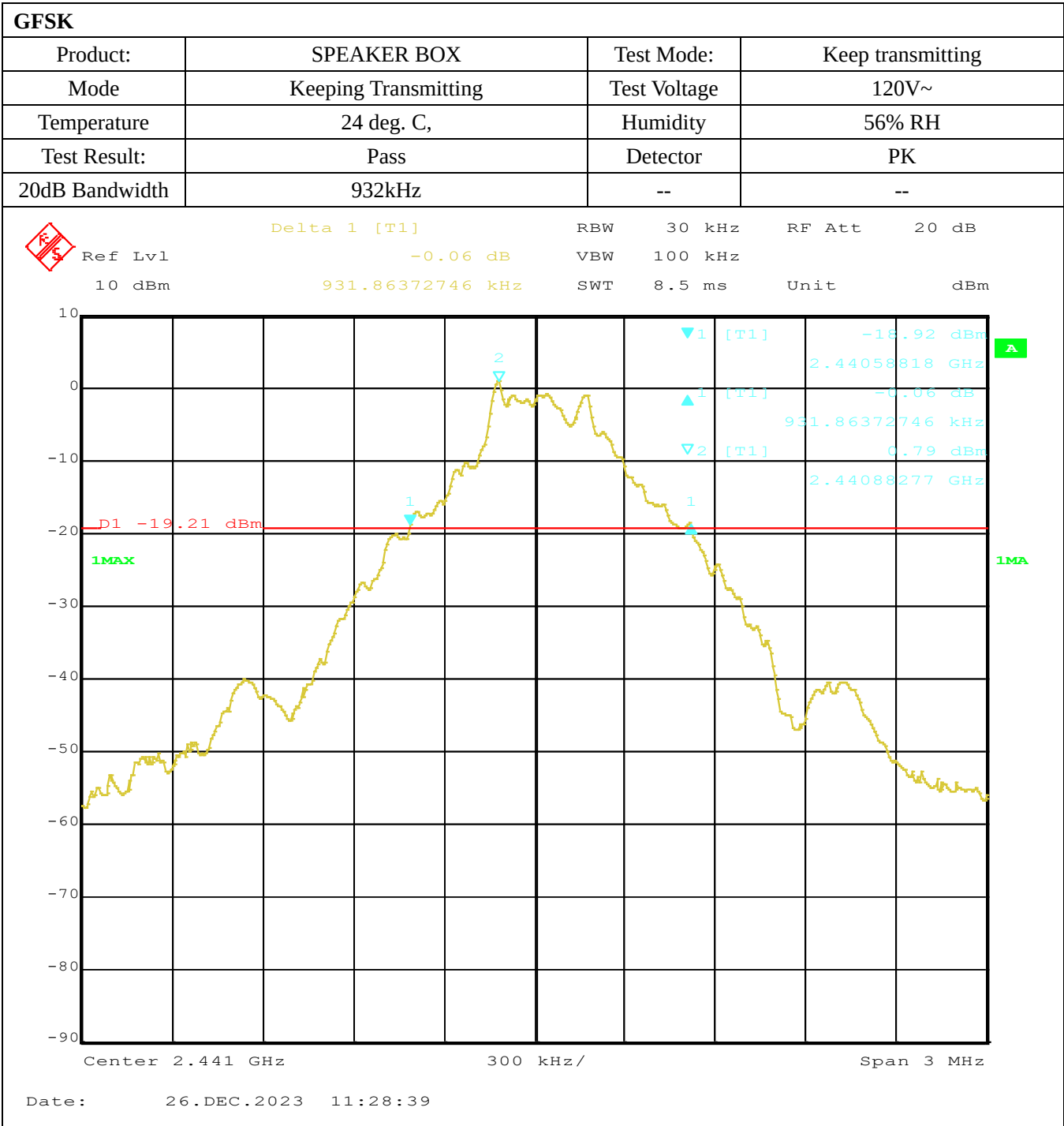
The 20dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 20dB.

**Limit**

N/A

The report refers only to the sample tested and does not apply to the bulk.  
This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for advertizing. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.  
In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES. reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.

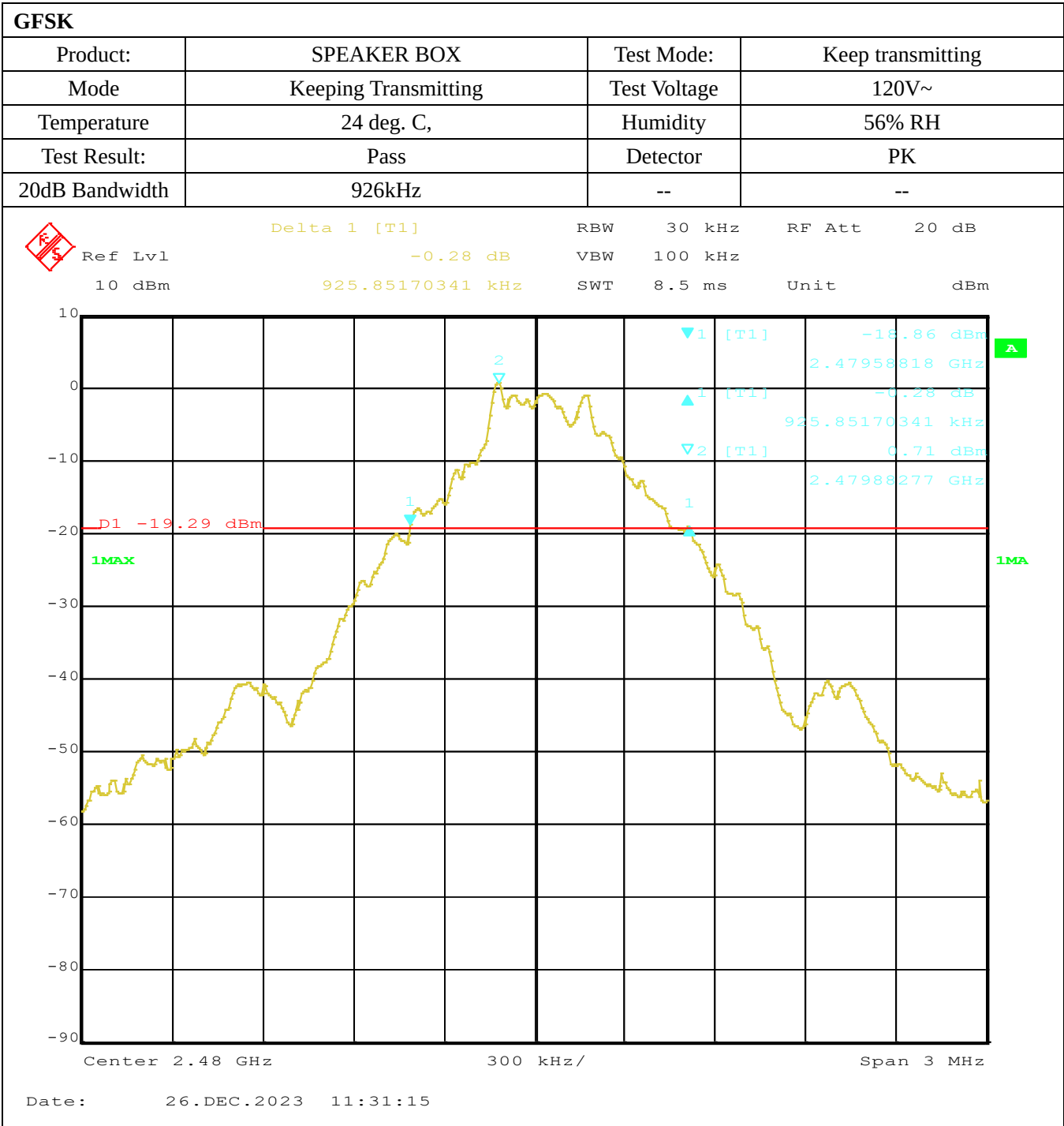




The report refers only to the sample tested and does not apply to the bulk.

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

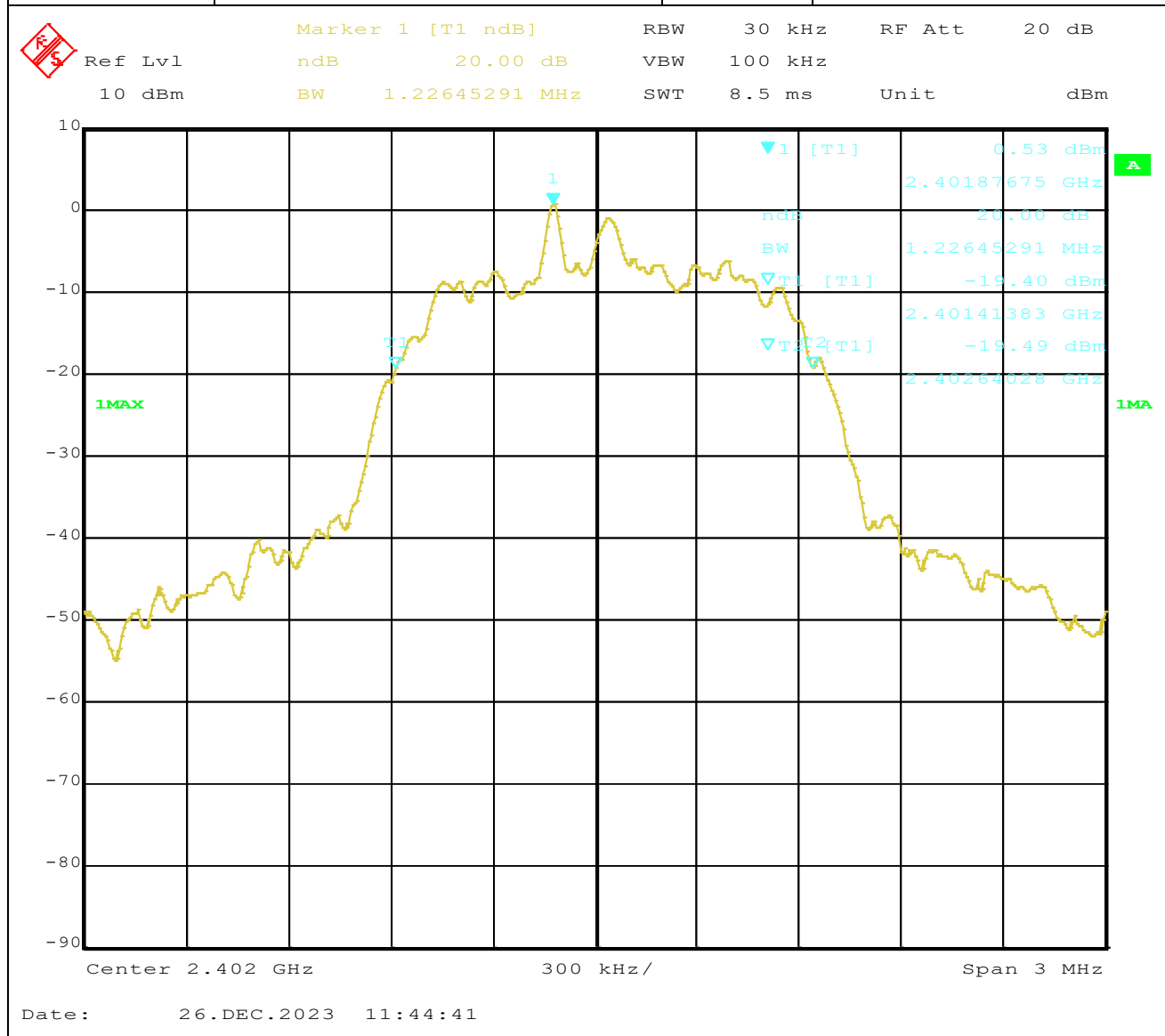
In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES. reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



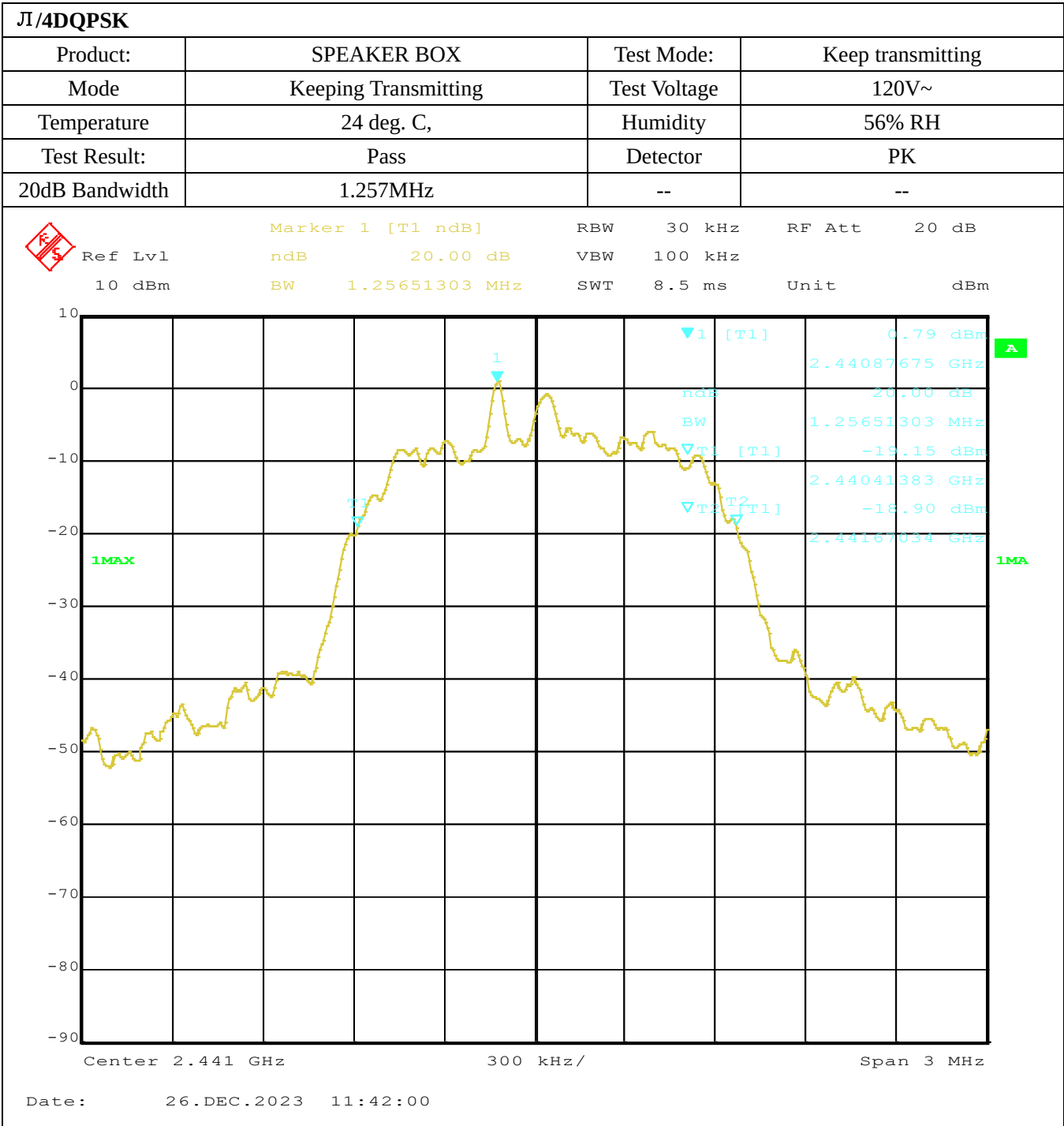
The report refers only to the sample tested and does not apply to the bulk.

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES. reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



In the event of the improper use of the report, The SHENZHEN TIMEWAY TESTING LABORATORIES reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



The report refers only to the sample tested and does not apply to the bulk.  
This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for advertizing. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.  
In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES. reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.

**Marker 1 [T1 ndB]** RBW 30 kHz RF Att 20 dB  
Ref Lvl ndB 20.00 dB VBW 100 kHz  
10 dBm BW 1.26252505 MHz SWT 8.5 ms Unit dBm

▼1 [T1] 0.71 dBm  
2.47988277 GHz  
ndB 20.00 dB  
BW 1.26252505 MHz  
▼T1 [T1] -19.84 dBm  
2.47940782 GHz  
▼T2 [T2] -19.66 dBm  
2.48067034 GHz

1MAX

1MA

Center 2.48 GHz 300 kHz/ Span 3 MHz

Date: 26.DEC.2023 11:37:29

In the event of the improper use of the report, The SHENZHEN TIMEWAY TESTING LABORATORIES reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



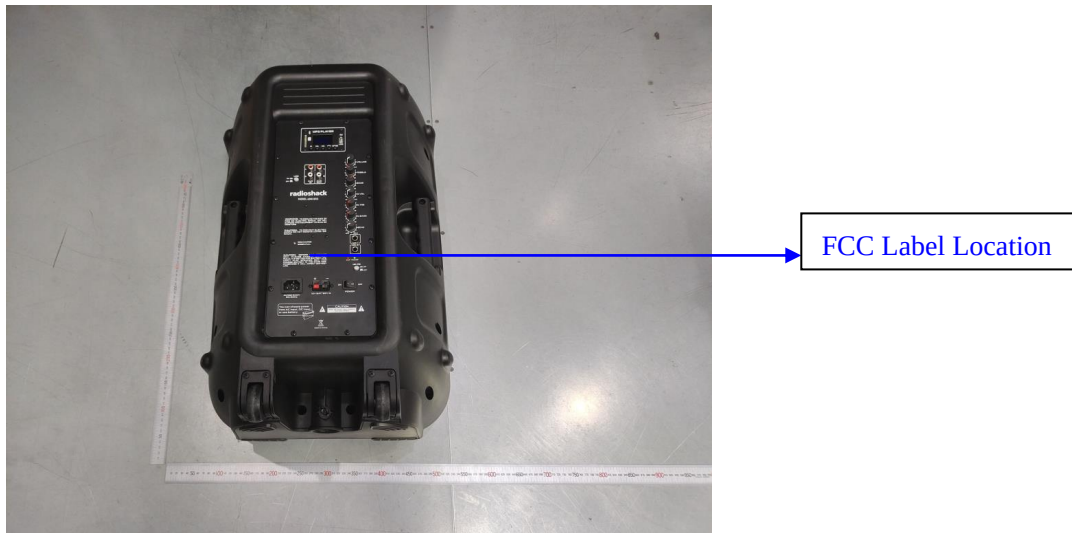
## 10.0 FCC ID Label

**FCC ID: 2BDUR-4001925**

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation

The label must not be a stick-on paper label. The label on these products must be permanently affixed to the product and readily visible at the time of purchase and must last the expected lifetime of the equipment not be readily detachable.

Mark Location:



FCC Label Location

The report refers only to the sample tested and does not apply to the bulk.

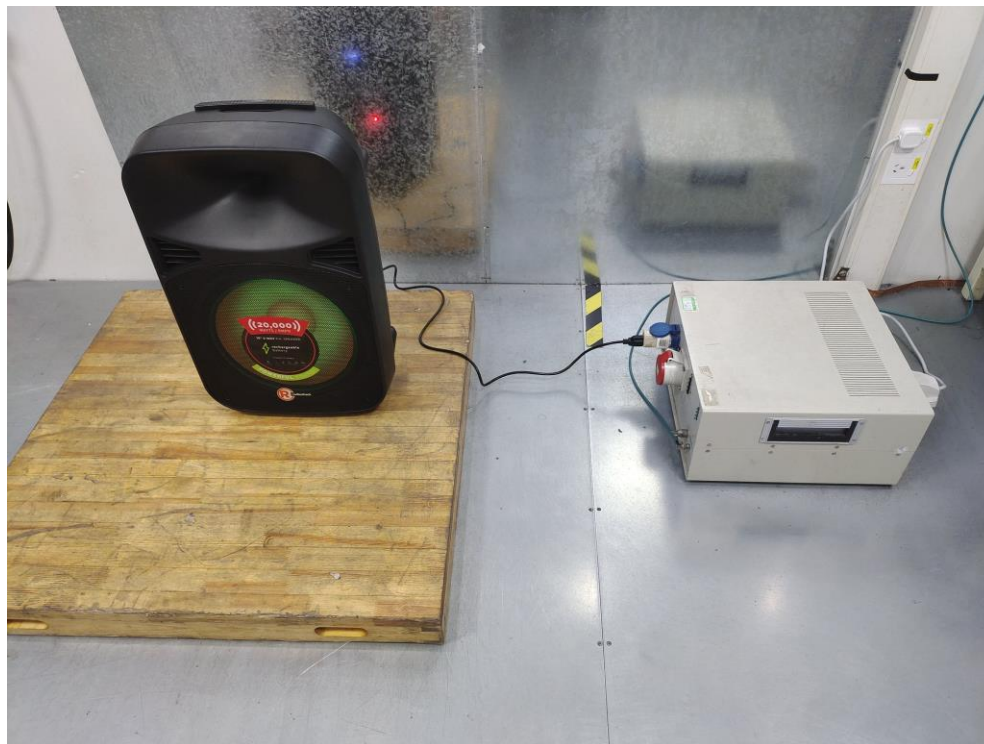
This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for advertising. The client to whom the report is issued may, however, show or send it, or a certified copy thereof prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES, to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES, will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES, reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



**11.0** Photo of testing

**11.1** Conducted test View



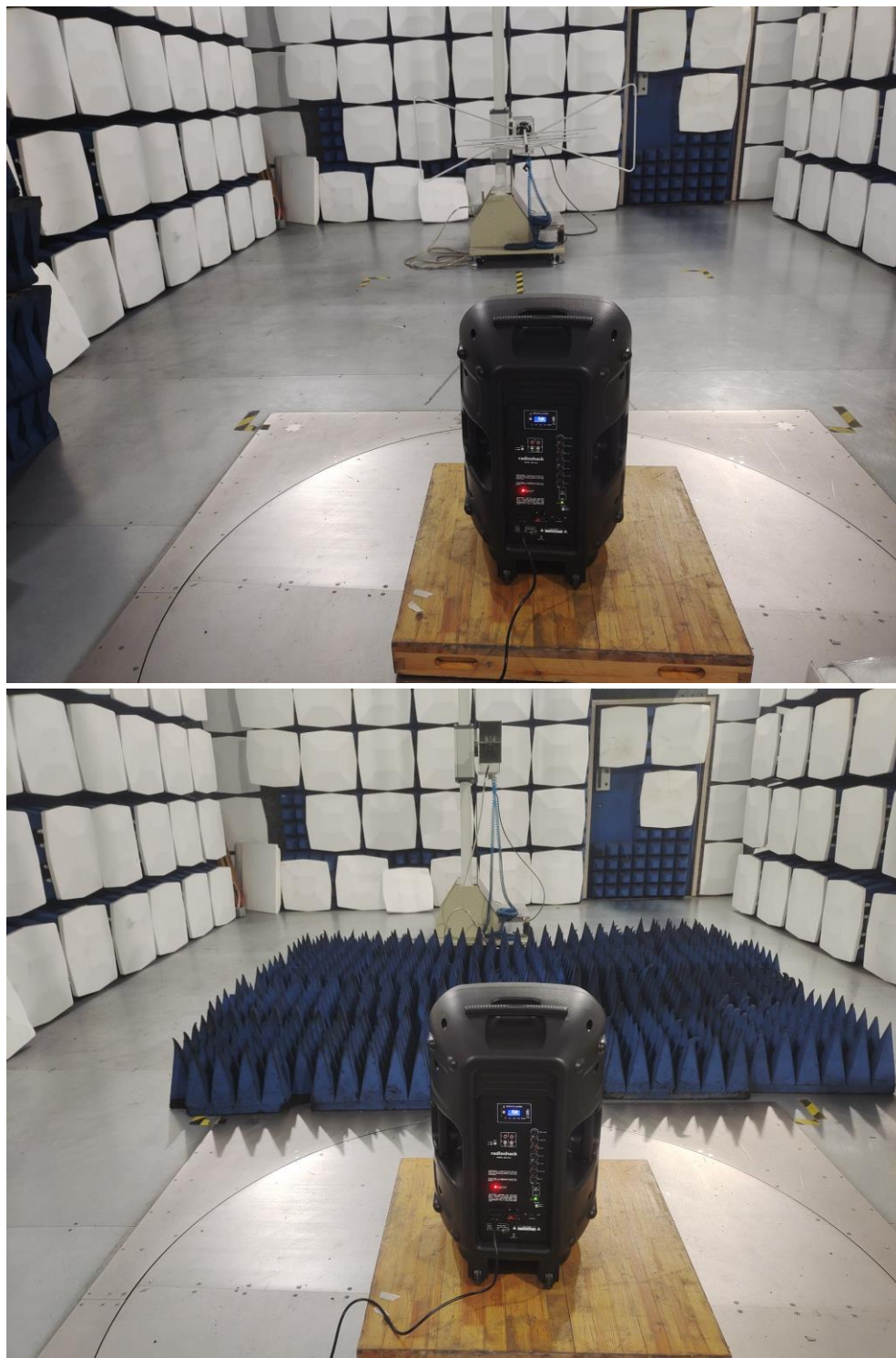
The report refers only to the sample tested and does not apply to the bulk.

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for advertizing. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES. reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



Radiated emission test view



The report refers only to the sample tested and does not apply to the bulk.

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for advertising. The client to whom the report is issued may, however, show or send it, or a certified copy thereof prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES, to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES, will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES, reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



11.2 Photographs – EUT

Outside View



The report refers only to the sample tested and does not apply to the bulk.

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for advertising. The client to whom the report is issued may, however, show or send it, or a certified copy thereof prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES, to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES, will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES, reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



Outside View



The report refers only to the sample tested and does not apply to the bulk.

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for advertising. The client to whom the report is issued may, however, show or send it, or a certified copy thereof prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES, to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES, will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES, reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



Outside View



The report refers only to the sample tested and does not apply to the bulk.

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for advertising. The client to whom the report is issued may, however, show or send it, or a certified copy thereof prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES, to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES, will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES, reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



Outside View



The report refers only to the sample tested and does not apply to the bulk.

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for advertising. The client to whom the report is issued may, however, show or send it, or a certified copy thereof prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES, to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES, will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES, reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



Outside View



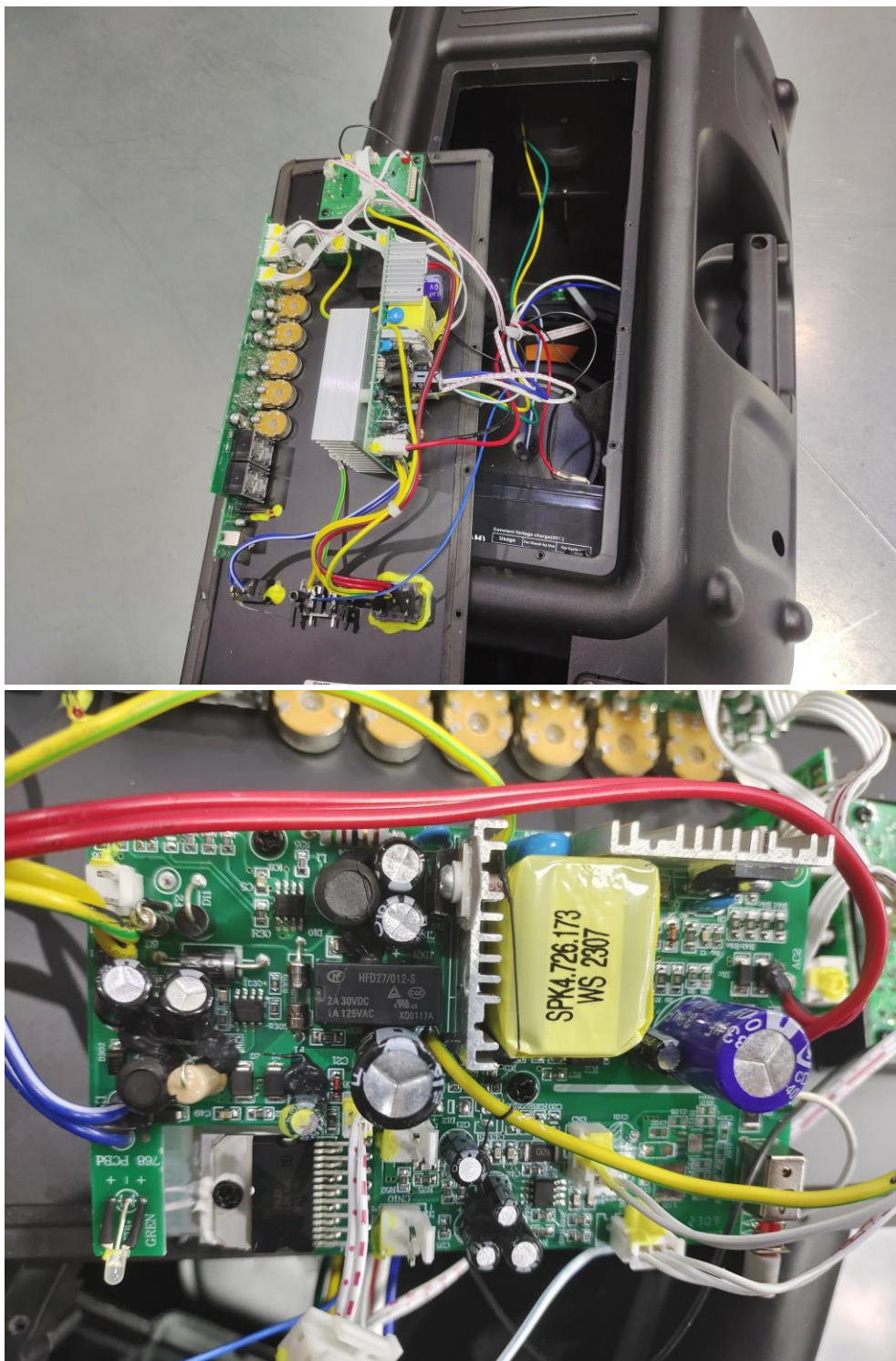
The report refers only to the sample tested and does not apply to the bulk.

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for advertising. The client to whom the report is issued may, however, show or send it, or a certified copy thereof prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES, to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES, will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report, The SHENZHEN TIMEWAY TESTING LABORATORIES, reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



Inside View



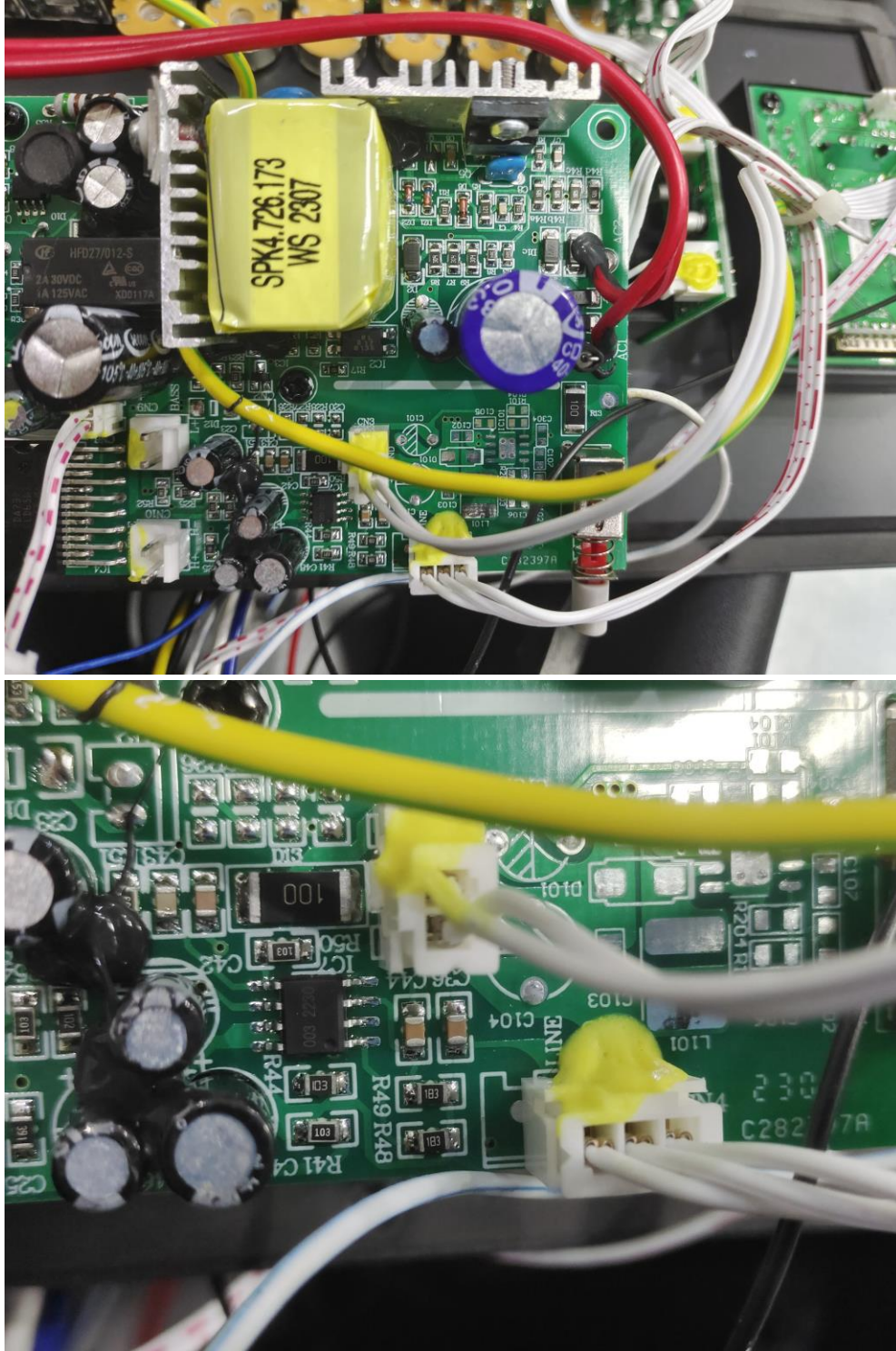
The report refers only to the sample tested and does not apply to the bulk.

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for advertising. The client to whom the report is issued may, however, show or send it, or a certified copy thereof prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES, to his customer, supplier or other persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report, the SHENZHEN TIMEWAY TESTING LABORATORIES reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



Inside View



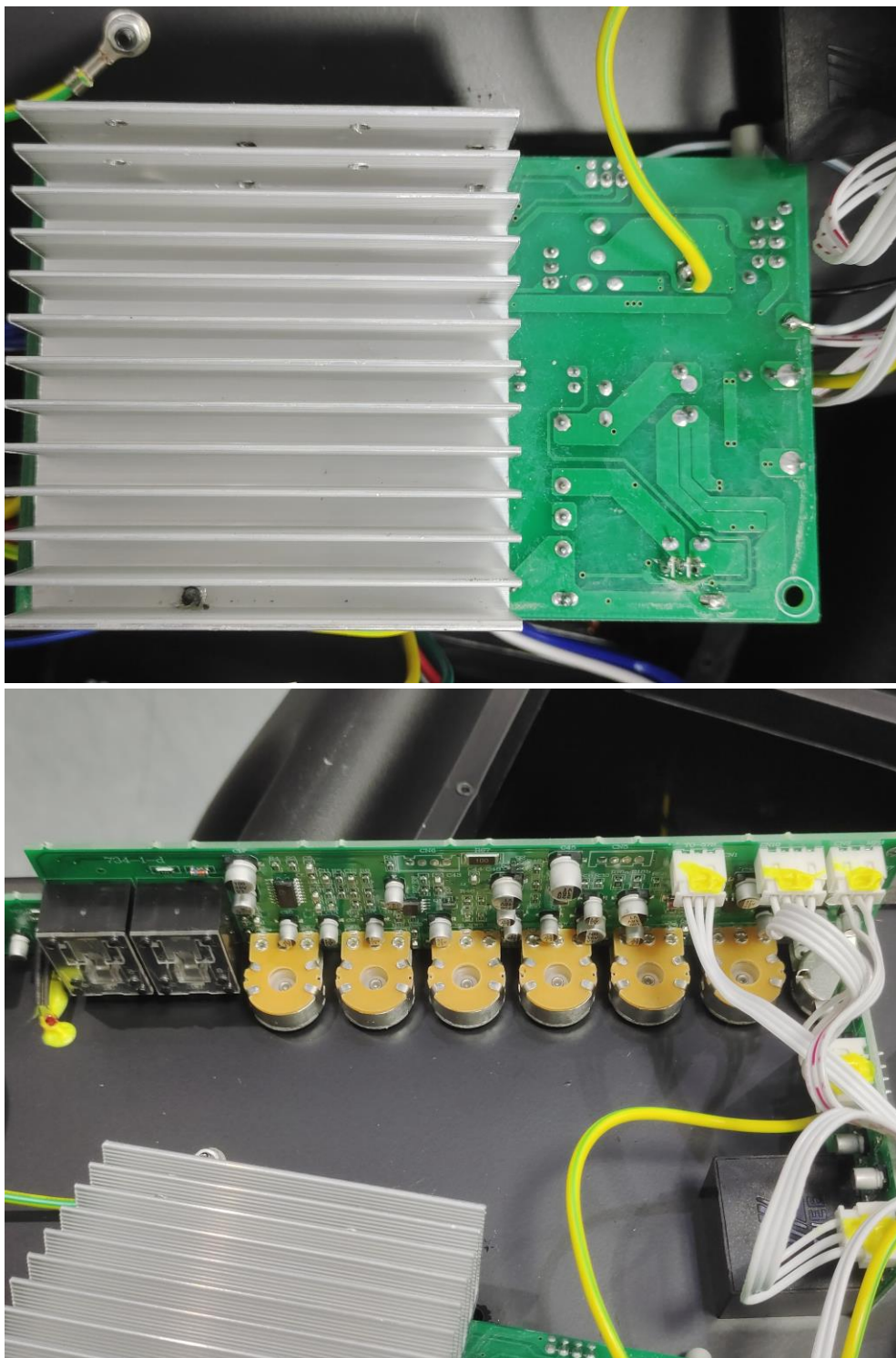
The report refers only to the sample tested and does not apply to the bulk.

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for advertising. The client to whom the report is issued may, however, show or send it, or a certified copy thereof prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES, to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES, will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES, reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



Inside View



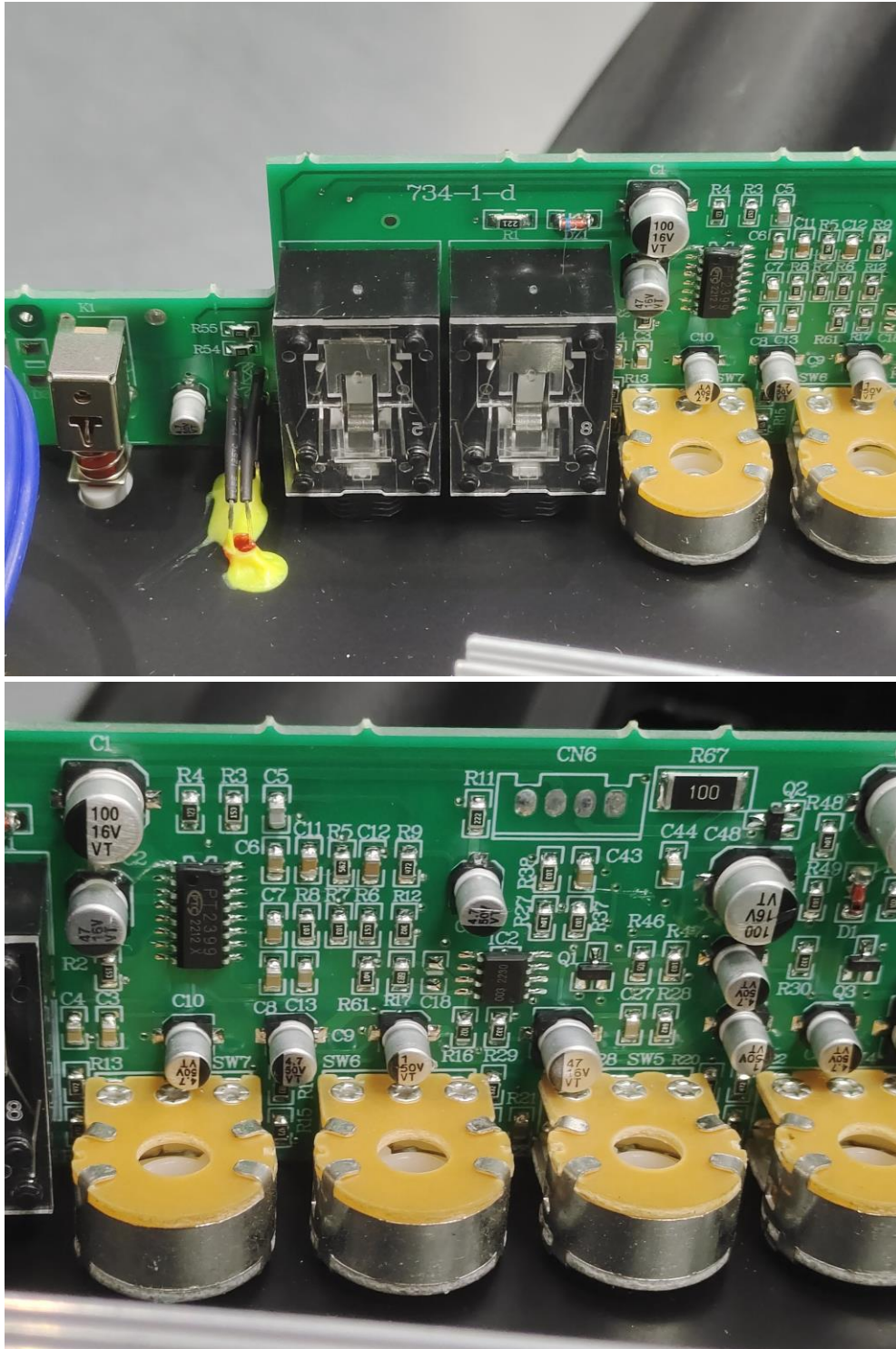
The report refers only to the sample tested and does not apply to the bulk.

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for advertising. The client to whom the report is issued may, however, show or send it, or a certified copy thereof prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES, to his customer, supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES, will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report, The SHENZHEN TIMEWAY TESTING LABORATORIES, reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



Inside View



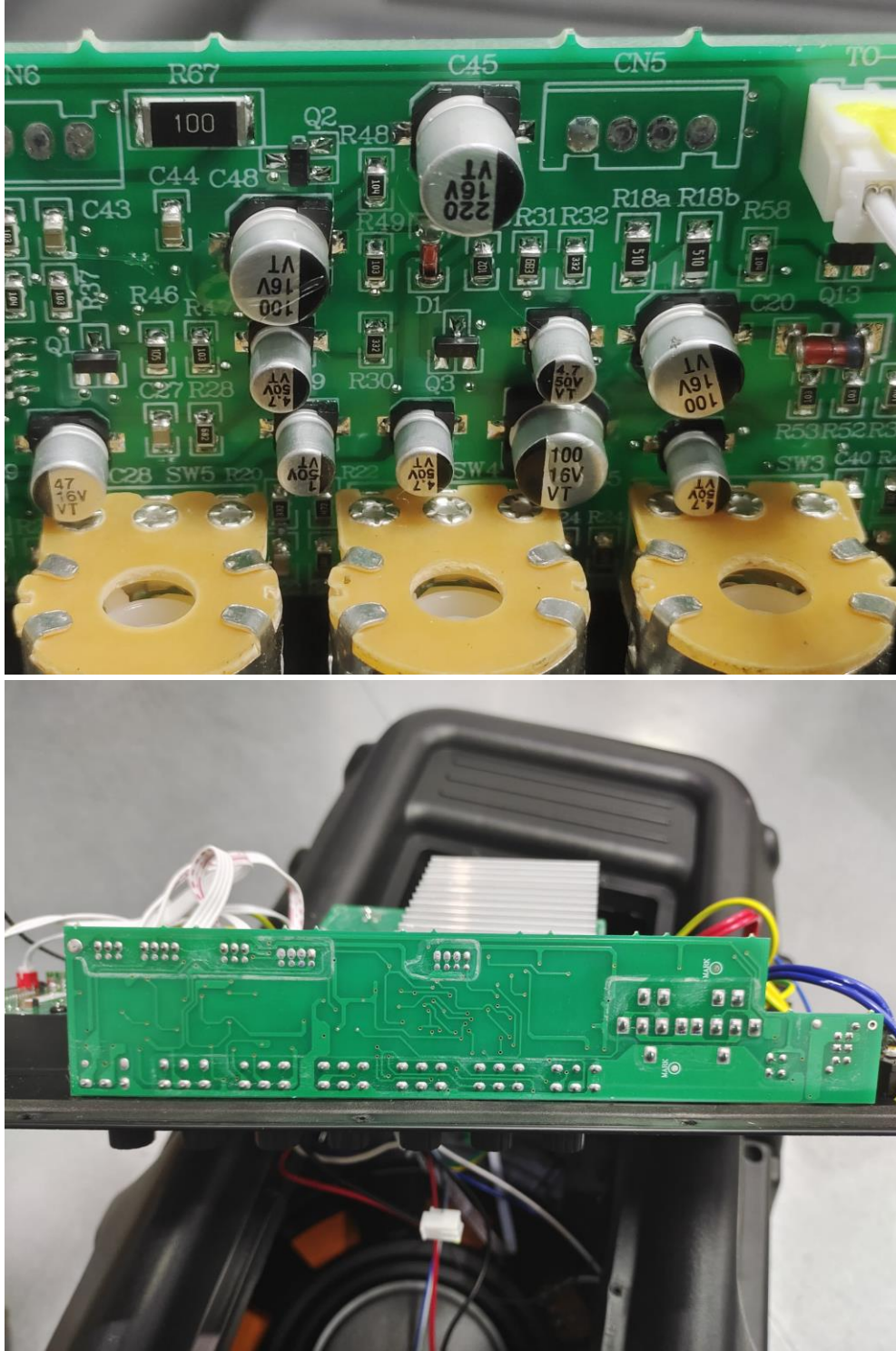
The report refers only to the sample tested and does not apply to the bulk.

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for advertising. The client to whom the report is issued may, however, show or send it, or a certified copy thereof prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES, to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES, will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES, reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



Inside View



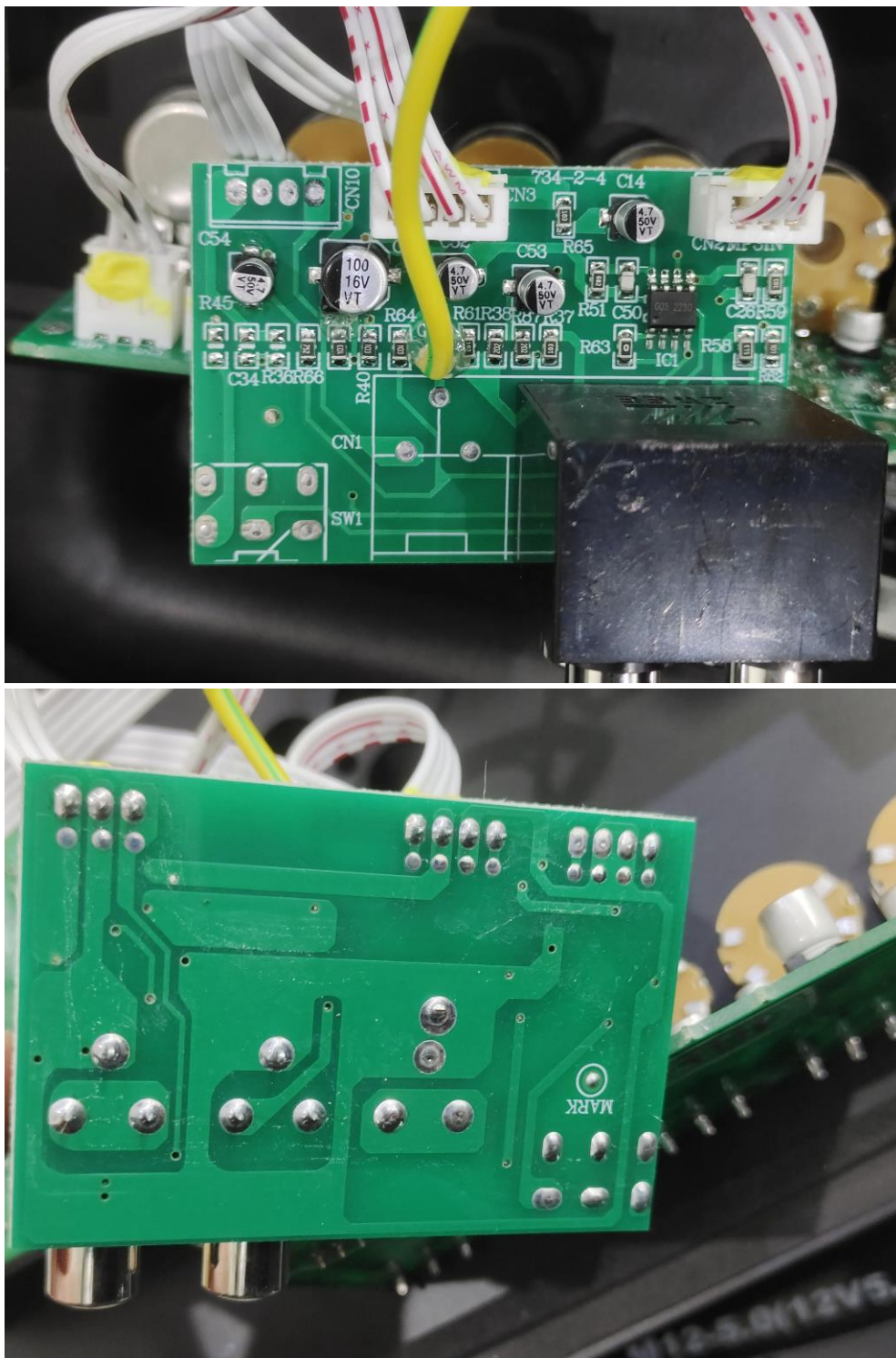
The report refers only to the sample tested and does not apply to the bulk.

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for advertising. The client to whom the report is issued may, however, show or send it, or a certified copy thereof prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES, to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES, will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES, reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



Inside View



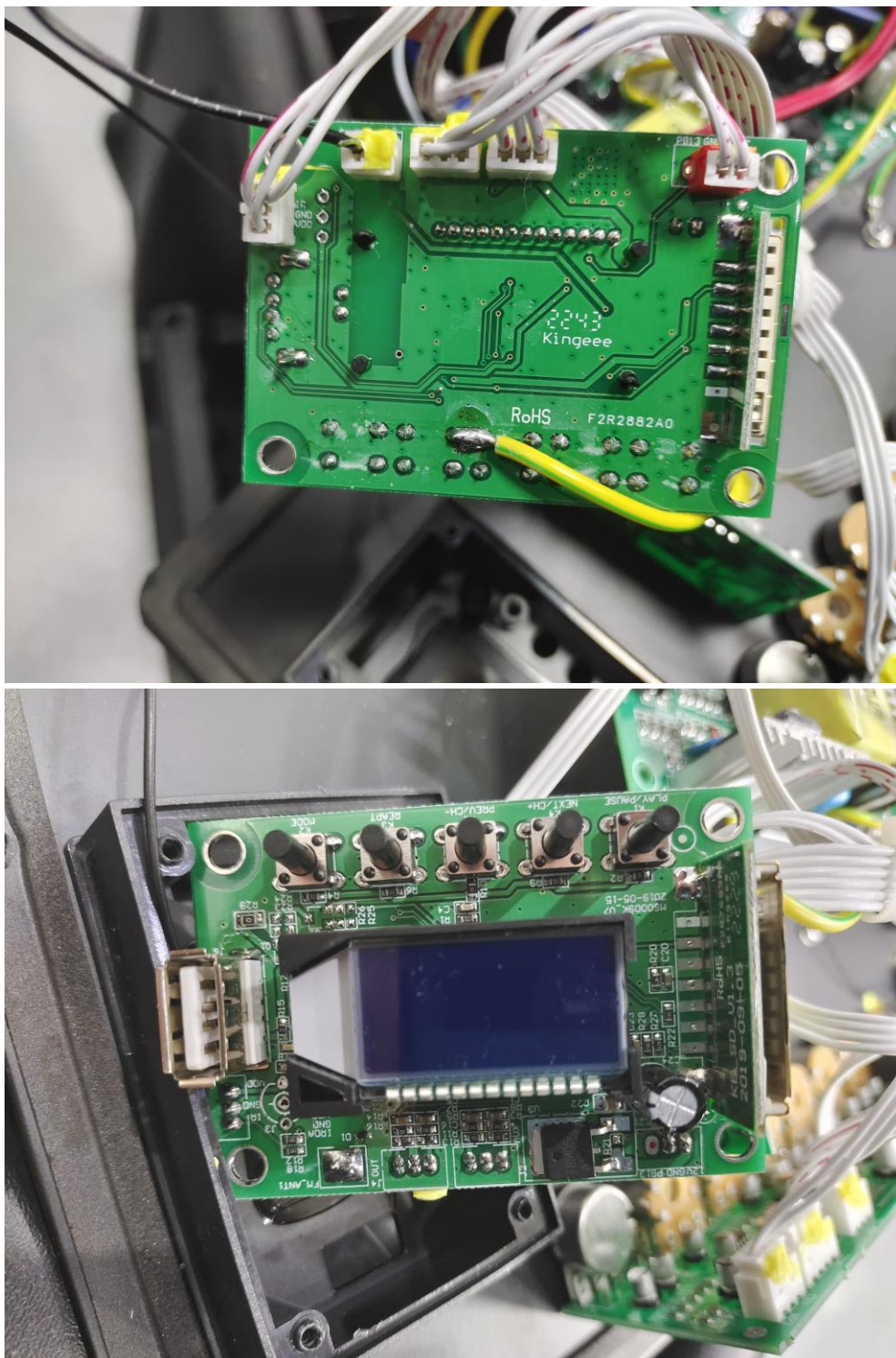
The report refers only to the sample tested and does not apply to the bulk.

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for advertising. The client to whom the report is issued may, however, show or send it, or a certified copy thereof prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES, to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES, will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES, reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



Inside View



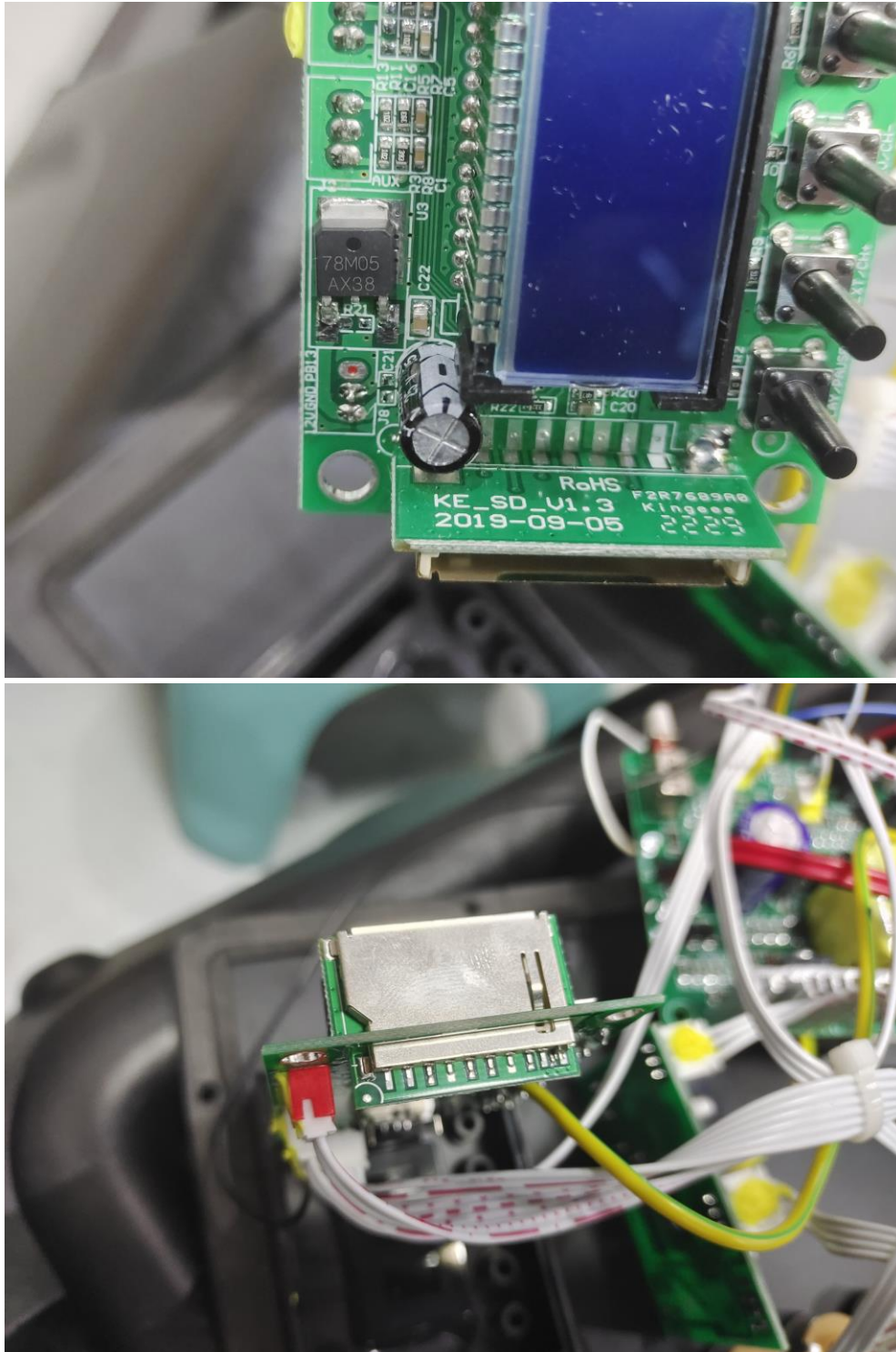
The report refers only to the sample tested and does not apply to the bulk.

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for advertising. The client to whom the report is issued may, however, show or send it, or a certified copy thereof prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES, to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES, will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES, reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



Inside View



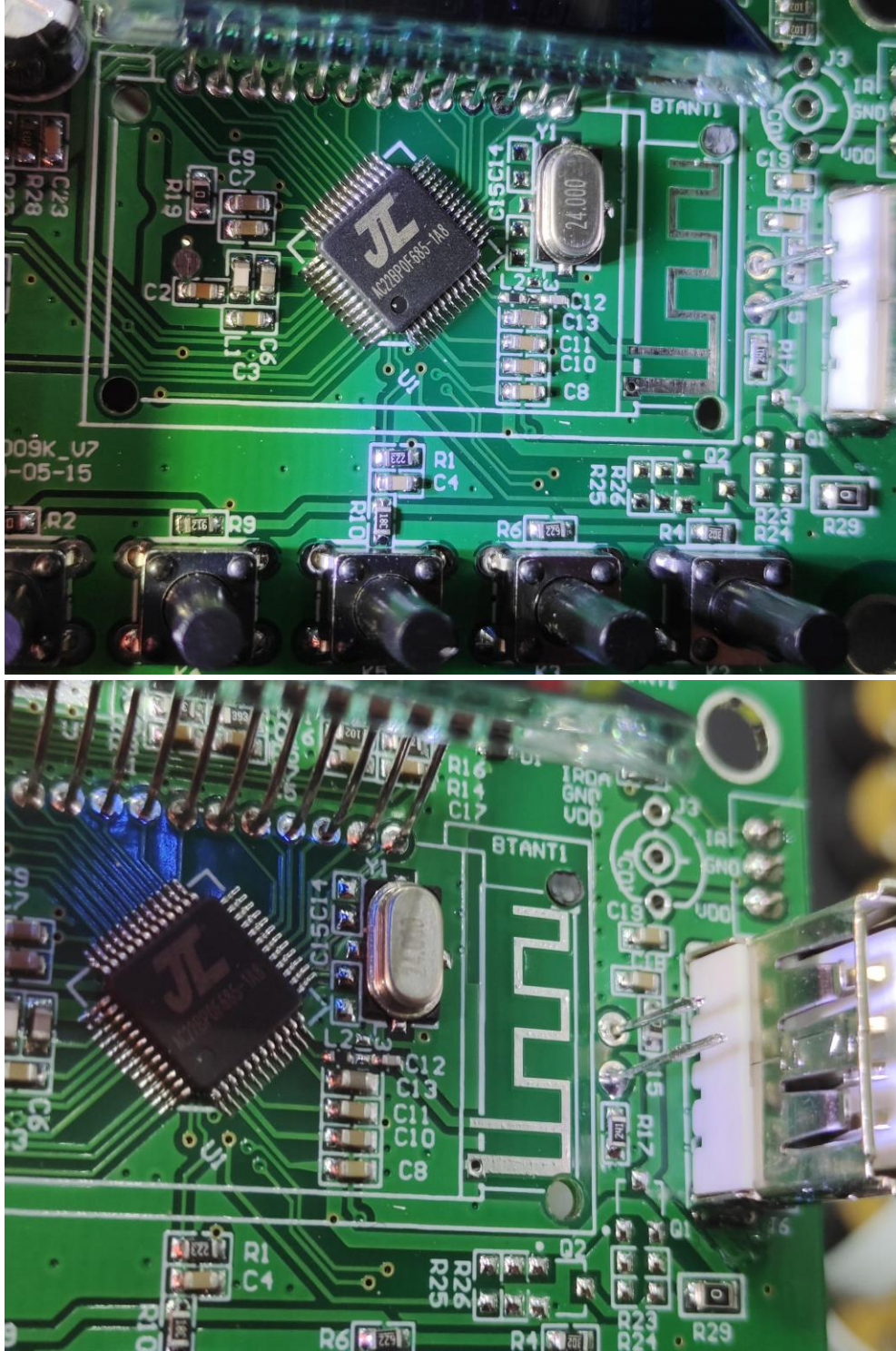
The report refers only to the sample tested and does not apply to the bulk.

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for advertising. The client to whom the report is issued may, however, show or send it, or a certified copy thereof prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES, to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES, will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES, reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



Inside View



--End of the report--

The report refers only to the sample tested and does not apply to the bulk.

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for advertising. The client to whom the report is issued may, however, show or send it, or a certified copy thereof prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES, to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES, will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES, reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.