

EMC TEST REPORT  
For

Shenzhen Yifan Tong Technology Co.,Ltd

Car Charger

Model No.: YFTC02-2C1A78W

Additional Model No.: CCPG78, YFT2C1A78W

Prepared for : Shenzhen Yifan Tong Technology Co.,Ltd  
Address : 506/5F, Bld-A, Quanju Industry Park, No.21, Jiangshi Rd, Guangming Dist, Shenzhen, China

Prepared by : Shenzhen AOCE Electronic Technology Service Co., Ltd.  
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Date of receipt of test sample : May 12, 2025  
Number of tested samples : 1  
Serial number : Prototype  
Date of Test : May 12, 2025 - May 19, 2025  
Date of Report : May 19, 2025



**EMC TEST REPORT****EN 55032:2015+A11:2020**

Electromagnetic compatibility of multimedia equipment - Emission requirements

**EN 55035:2017+A11:2020**

Information technology equipment-Immunity characteristics-Limits and methods of measurement

**Report Reference No. ....: AOC250519104E**

Date Of Issue.....: May 19, 2025

**Testing Laboratory Name.....: Shenzhen AOCE Electronic Technology Service Co., Ltd.**

Address.....: Room 202, 2nd Floor, No.12th Building of Xinhe Tongfuyu Industrial Park, Fuhai Street, Baoan District, Shenzhen, Guangdong, China

Testing Location/ Procedure.....: Full application of Harmonised standards ☒  
Partial application of Harmonised standards ☐  
Other standard testing method ☐**Applicant's Name.....: Shenzhen Yifan Tong Technology Co.,Ltd**

Address.....: 506/5F, Bld-A, Quanju Industry Park, No.21, Jiangshi Rd, Guangming Dist, Shenzhen, China

**Test Specification:**Standard.....: EN 55032:2015+A11:2020  
EN IEC 61000-3-2:2019+A1:2021+A2:2024  
EN 61000-3-3:2013+A1:2019+A2:2021+AC:2022  
EN 55035:2017+A11:2020

Test Report Form No.....: AOCEMC-1.0

TRF Originator.....: Shenzhen AOCE Electronic Technology Service Co., Ltd.

Master TRF.....: Dated 2011-03

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**Test Item Description.....: Car Charger**

Trade Mark.....: N/A

Model/ Type Reference.....: YFTC02-2C1A78W

Ratings.....: Input: DC 12-24V, 8A  
USB-C1 Output: DC 5V/3A, 9V/3A, 12V/2.5A  
USB-C2 Output: DC 5V/3A, 9V/3A, 12V/2.5A  
USB-A Output: DC 5V/3A, 9V/2A, 12V/1.5A USB-C1+USB-C2+USB-A  
Output:30W+30W+18W  
Total output: 78W Max**Result .....: Positive****Compiled by:**

David Liu

**Supervised by:**

Kevin Huang

**Approved by:**

Jackson Fang

David Liu/ File administrators

Kevin Huang/ Technique principal

Jackson Fang/ Manager

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## EMC -- TEST REPORT

**Test Report No. : AOC250519104E**May 19, 2025

Date of issue

Type / Model..... : YFTC02-2C1A78W

EUT..... : Car Charger

**Applicant..... : Shenzhen Yifan Tong Technology Co.,Ltd**Address..... : 506/5F, Bld-A, Qianju Industry Park, No.21, Jiangshi Rd,  
Guangming Dist, Shenzhen, China

Telephone..... : /

Fax..... : /

**Manufacturer..... : Shenzhen Yifan Tong Technology Co.,Ltd**Address..... : 506/5F, Bld-A, Qianju Industry Park, No.21, Jiangshi Rd,  
Guangming Dist, Shenzhen, China

Telephone..... : /

Fax..... : /

**Factory..... : Shenzhen Yifan Tong Technology Co.,Ltd**Address..... : 506/5F, Bld-A, Qianju Industry Park, No.21, Jiangshi Rd,  
Guangming Dist, Shenzhen, China

Telephone..... : /

Fax..... : /

**Test Result** according to the standards on page 6: **Pass**

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.

## TABLE OF CONTENT

| Test Report Description                                   | Page      |
|-----------------------------------------------------------|-----------|
| <b>1. SUMMARY OF STANDARDS AND RESULTS .....</b>          | <b>6</b>  |
| 1.1. Description of Standards and Results .....           | 6         |
| 1.2. Description of Performance Criteria .....            | 7         |
| <b>2. GENERAL INFORMATION .....</b>                       | <b>8</b>  |
| 2.1. Description of Device (EUT) .....                    | 8         |
| 2.2. Description of Test Facility .....                   | 8         |
| 2.3. Statement of the measurement uncertainty .....       | 8         |
| 2.4. Measurement Uncertainty .....                        | 8         |
| <b>3. measuring Devices and test equipment .....</b>      | <b>9</b>  |
| 3.1. Conducted Disturbance .....                          | 9         |
| 3.2. Disturbance Power .....                              | 9         |
| 3.3. Radiated Electromagnetic Disturbance .....           | 9         |
| 3.4. Radiated Disturbance (Electric Field) .....          | 9         |
| 3.5. Harmonic Current .....                               | 9         |
| 3.6. Voltage fluctuation and Flicker .....                | 9         |
| 3.7. Electrostatic Discharge .....                        | 10        |
| 3.8. RF Field Strength Susceptibility .....               | 10        |
| 3.9. Electrical Fast Transient/Burst .....                | 10        |
| 3.10. Surge .....                                         | 10        |
| 3.11. Conducted Susceptibility .....                      | 10        |
| 3.12. Power Frequency Magnetic Field Susceptibility ..... | 10        |
| 3.13. Voltage Dips .....                                  | 10        |
| 3.14. Voltage Short Interruptions .....                   | 10        |
| <b>4. RADIATED EMISSION MEASUREMENT .....</b>             | <b>12</b> |
| 4.1. Block Diagram of Test Setup .....                    | 12        |
| 4.2. Measuring Standard .....                             | 12        |
| 4.3. Radiated Emission Limits .....                       | 12        |
| 4.4. EUT Configuration on Test .....                      | 13        |
| 4.5. Operating Condition of EUT .....                     | 13        |
| 4.6. Test Procedure .....                                 | 13        |
| 4.7. Test Results .....                                   | 13        |
| <b>5. ELECTROSTATIC DISCHARGE IMMUNITY TEST .....</b>     | <b>15</b> |
| 5.1. Block Diagram of Test Setup .....                    | 15        |
| 5.2. Test Standard .....                                  | 15        |
| 5.3. Severity Levels and Performance Criterion .....      | 15        |
| 5.4. EUT Configuration on Test .....                      | 15        |
| 5.5. Operating Condition of EUT .....                     | 16        |
| 5.6. Test Procedure .....                                 | 16        |
| 5.7. Test Results .....                                   | 16        |
| <b>6. RF FIELD STRENGTH SUSCEPTIBILITY TEST .....</b>     | <b>18</b> |
| 6.1. Block Diagram of Test .....                          | 18        |
| 6.2. Test Standard .....                                  | 18        |
| 6.3. Severity Levels and Performance Criterion .....      | 18        |
| 6.4. EUT Configuration on Test .....                      | 19        |
| 6.5. Operating Condition of EUT .....                     | 19        |
| 6.6. Test Procedure .....                                 | 19        |
| 6.7. Test Results .....                                   | 19        |
| <b>7. MAGNETIC FIELD SUSCEPTIBILITY TEST .....</b>        | <b>21</b> |
| 7.1. Block Diagram of Test Setup .....                    | 21        |
| 7.2. Test Standard .....                                  | 21        |
| 7.3. Severity Levels and Performance Criterion .....      | 21        |
| 7.4. EUT Configuration on Test .....                      | 21        |

7.5.Test Procedure ..... 22

7.6.Test Results ..... 22

**8. PHOTOGRAPH.....24**

8.1.Photo of Radiated Measurement..... 24

**9. EXTERNAL AND INTERNAL PHOTOS OF THE EUT ..... 25**

# 1. SUMMARY OF STANDARDS AND RESULTS

## 1.1. Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below.

| EMISSION (EN 55032:2015+A11:2020)                 |                                               |                      |         |
|---------------------------------------------------|-----------------------------------------------|----------------------|---------|
| Description of Test Item                          | Standard                                      | Limits               | Results |
| Conducted disturbance at mains terminals          | EN 55032:2015+A11:2020                        | Class B              | N/A     |
| Conducted disturbance at telecommunication port   | EN 55032:2015+A11:2020                        | Class B              | N/A     |
| Radiated disturbance                              | EN 55032:2015+A11:2020                        | Class B              | PASS    |
| Harmonic current emissions                        | EN IEC 61000-3-2: 2019+A1: 2021+A2: 2024      | Class A              | N/A     |
| Voltage fluctuations & flicker                    | EN 61000-3-3: 2013+A1: 2019+A2: 2021+AC: 2022 | -----                | N/A     |
| IMMUNITY(EN 55035: 2017+A11:2020)                 |                                               |                      |         |
| Description of Test Item                          | Basic Standard                                | Performance Criteria | Results |
| Electrostatic discharge (ESD)                     | EN 61000-4-2: 2009                            | B                    | PASS    |
| Radio-frequency, Continuous radiated disturbance  | EN 61000-4-3: 2020                            | A                    | PASS    |
| Electrical fast transient (EFT)                   | EN 61000-4-4: 2012                            | B                    | N/A     |
| Surge (Input a.c. power ports)                    | EN 61000-4-5: 2014+A1: 2017                   | B                    | N/A     |
| Surge (Telecommunication ports)                   |                                               | B                    | N/A     |
| Radio-frequency, Continuous conducted disturbance | EN 61000-4-6: 2014+AC: 2015                   | A                    | N/A     |
| Power frequency magnetic field                    | EN 61000-4-8: 2010                            | A                    | PASS    |
| Voltage dips, >95% reduction                      | EN 61000-4-11: 2020                           | B                    | N/A     |
| Voltage dips, 30% reduction                       |                                               | B                    | N/A     |
| Voltage interruptions                             |                                               | C                    | N/A     |
| N/A is an abbreviation for Not Applicable.        |                                               |                      |         |

## 1.2. Description of Performance Criteria

### General Performance Criteria

Examples of functions defined by the manufacturer to be evaluated during testing include, but are not limited to, the following:

- essential operational modes and states;
- tests of all peripheral access (hard disks, floppy disks, printers, keyboard, mouse, etc.);
- quality of software execution;
- quality of data display and transmission;
- quality of speech transmission.

#### 1.2.1. Performance criterion A

The equipment shall continue to operate as intended without operator intervention. No degradation of performance or loss of function is allowed below a performance level specified by the manufacture when the equipment is used as intended. The performance level may be replaced by a permissible loss of performance. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and by what the user may reasonably expect from the equipment if used as intended.

#### 1.2.2. Performance criterion B

After the test, the equipment shall continue to operate as intended without operator intervention. No degradation of performance or loss of function is allowed, after the application of the phenomena below a performance level specified by the manufacture, when the equipment is used as intended. The performance level may be replaced by a permissible loss of performance.

During the test, degradation of performance is allowed. However, no change of operation state or stored data is allowed to persist after the test.

If the minimum performance level (or the permissible performance loss) is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and by what the user may reasonably expect from the equipment if used as intended.

#### 1.2.3. Performance criterion C

Loss of function is allowed, provided the function is self-recoverable, or can be restored by the operation of the controls by the user in accordance with the manufacture's instructions.

Functions, and/or information stored in non-volatile memory, or protected by a battery backup, shall not be lost.

## 2. GENERAL INFORMATION

### 2.1. Description of Device (EUT)

EUT : Car Charger

Model Number : YFTC02-2C1A78W

Power Supply : Input: DC 12-24V, 8A  
USB-C1 Output: DC 5V/3A, 9V/3A, 12V/2.5A  
USB-C2 Output: DC 5V/3A, 9V/3A, 12V/2.5A  
USB-A Output: DC 5V/3A, 9V/2A, 12V/1.5A  
USB-C1+USB-C2+USB-A Output: 30W+30W+18W  
Total output: 78W Max

EUT Clock Frequency :  $\leq$  108MHz

### 2.2. Description of Test Facility

Site Description  
EMC Lab.

### 2.3. Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. To CISPR 16 – 4 “Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements” and is documented in the AOCE quality system acc. To DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

### 2.4. Measurement Uncertainty

| Test Item              |   | Frequency Range | Uncertainty         | Note |
|------------------------|---|-----------------|---------------------|------|
| Radiation Uncertainty  | : | 30MHz~200MHz    | $\pm 2.96\text{dB}$ | (1)  |
|                        |   | 200MHz~1000MHz  | $\pm 3.10\text{dB}$ | (1)  |
| Conduction Uncertainty | : | 150kHz~30MHz    | $\pm 1.63\text{dB}$ | (1)  |
| Power disturbance      | : | 30MHz~300MHz    | $\pm 1.60\text{dB}$ | (1)  |

(1). This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of  $k=2$ .



### 3. MEASURING DEVICES AND TEST EQUIPMENT

#### 3.1. Conducted Disturbance

| Item | Test Equipment    | Manufacturer    | Model No. | Serial No. | Last Cal. |
|------|-------------------|-----------------|-----------|------------|-----------|
| 1    | EMI Test Receiver | ROHDE & SCHWARZ | ESCI      | 101142     | 2024/4/13 |
| 2    | EMI Test Receiver | ROHDE & SCHWARZ | ESPI      | 101840     | 2024/4/13 |
| 3    | Artificial Mains  | ROHDE & SCHWARZ | ENV216    | 101288     | 2024/4/13 |
| 4    | EMI Test Software | AUDIX           | E3        | N/A        | 2024/4/13 |

#### 3.2. Disturbance Power

| Item | Test Equipment    | Manufacturer    | Model No. | Serial No. | Last Cal. |
|------|-------------------|-----------------|-----------|------------|-----------|
| 1    | EMI Test Receiver | ROHDE & SCHWARZ | ESCI      | 101142     | 2024/4/13 |
| 2    | EMI Test Receiver | ROHDE & SCHWARZ | ESPI      | 101840     | 2024/4/13 |
| 3    | Absorbing clamp   | ROHDE & SCHWARZ | MDS 21    | 4033       | 2024/4/13 |
| 4    | EMI Test Software | AUDIX           | E3        | N/A        | 2024/4/13 |

#### 3.3. Radiated Electromagnetic Disturbance

| Item | Test Equipment      | Manufacturer    | Model No. | Serial No. | Last Cal. |
|------|---------------------|-----------------|-----------|------------|-----------|
| 1    | EMI Test Receiver   | ROHDE & SCHWARZ | ESCI      | 101142     | 2024/4/13 |
| 2    | Triple-loop Antenna | EVERFINE        | LLA-2     | 11050003   | 2024/4/13 |
| 3    | EMI Test Receiver   | ROHDE & SCHWARZ | ESPI      | 101840     | 2024/4/13 |
| 4    | EMI Test Software   | AUDIX           | E3        | N/A        | 2024/4/13 |

#### 3.4. Radiated Disturbance (Electric Field)

| Item | Test Equipment    | Manufacturer         | Model No. | Serial No. | Last Cal. |
|------|-------------------|----------------------|-----------|------------|-----------|
| 1    | EMI Test Receiver | ROHDE & SCHWARZ      | ESCI      | 101142     | 2024/4/13 |
| 2    | EMI Test Receiver | ROHDE & SCHWARZ      | ESPI      | 101840     | 2024/4/13 |
| 3    | Log per Antenna   | SCHWARZBECK          | VULB9163  | 9163-470   | 2024/4/13 |
| 4    | Amplifier         | Compliance Direction | PAP-0102  | 21001      | 2024/4/13 |
| 5    | EMI Test Software | AUDIX                | E3        | N/A        | 2024/4/13 |

#### 3.5. Harmonic Current

| Item | Test Equipment             | Manufacturer | Model No. | Serial No.  | Last Cal. |
|------|----------------------------|--------------|-----------|-------------|-----------|
| 1    | Power Analyzer Test System | Voltech      | PM6000    | 20000670053 | 2024/4/13 |

#### 3.6. Voltage fluctuation and Flicker

| Item | Test Equipment             | Manufacturer | Model No. | Serial No.  | Last Cal. |
|------|----------------------------|--------------|-----------|-------------|-----------|
| 1    | Power Analyzer Test System | Voltech      | PM6000    | 20000670053 | 2024/4/13 |

### 3.7.Electrostatic Discharge

| Item | Test Equipment | Manufacturer | Model No. | Serial No. | Last Cal. |
|------|----------------|--------------|-----------|------------|-----------|
| 1    | ESD Simulator  | KIKUSUI      | KC001311  | KES4021    | 2024/4/13 |

### 3.8.RF Field Strength Susceptibility

| Item | Test Equipment          | Manufacturer    | Model No.       | Serial No. | Last Cal. |
|------|-------------------------|-----------------|-----------------|------------|-----------|
| 1    | SIGNAL GENERATOR        | HP              | 8648A           | 625U00573  | 2024/4/13 |
| 2    | Amplifier               | AR              | 500A100         | 17034      | 2024/4/13 |
| 3    | Amplifier               | AR              | 100W/1000M<br>1 | 17028      | 2024/4/13 |
| 4    | Isotropic Field Monitor | AR              | FM2000          | 16829      | 2024/4/13 |
| 5    | Isotropic Field Probe   | AR              | FP2000          | 16755      | 2024/4/13 |
| 6    | Bi-conic Antenna        | EMCO            | 3108            | 9507-2534  | 2024/4/13 |
| 7    | By-log-periodic Antenna | AR              | AT1080          | 16812      | 2024/4/13 |
| 8    | EMS Test Software       | ROHDE & SCHWARZ | ESK1            | N/A        | 2024/4/13 |

### 3.9.Electrical Fast Transient/Burst

| Item | Test Equipment                          | Manufacturer | Model No. | Serial No. | Last Cal. |
|------|-----------------------------------------|--------------|-----------|------------|-----------|
| 1    | Electrical fast transient(EFT)generator | 3CTEST       | EFT-4021  | EC0461044  | 2024/4/13 |
| 2    | Coupling Clamp                          | 3CTEST       | EFTC      | EC0441098  | 2024/4/13 |

### 3.10.Surge

| Item | Test Equipment              | Manufacturer | Model No. | Serial No. | Last Cal. |
|------|-----------------------------|--------------|-----------|------------|-----------|
| 1    | Surge test system           | 3CTEST       | SG-5006G  | EC5581070  | 2024/4/13 |
| 2    | Coupling/decoupling network | 3CTEST       | SGN-5010G | ECS5591033 | 2024/4/13 |

### 3.11.Conducted Susceptibility

| Item | Test Equipment                 | Manufacturer | Model No. | Serial No. | Last Cal. |
|------|--------------------------------|--------------|-----------|------------|-----------|
| 1    | Conducted Immunity Test System | FRANKONIA    | CIT-10    | 126A1195   | 2024/4/13 |
| 2    | Coupling/decoupling network    | FRANKONIA    | CDN-M2+M3 | A2210177   | 2024/4/13 |

### 3.12.Power Frequency Magnetic Field Susceptibility

| Item | Test Equipment                             | Manufacturer | Model No.       | Serial No. | Last Cal. |
|------|--------------------------------------------|--------------|-----------------|------------|-----------|
| 1    | Power frequency mag-field generator System | EVERFINE     | EMS61000-8<br>K | 906003     | 2024/4/13 |

3.13.Voltage Dips

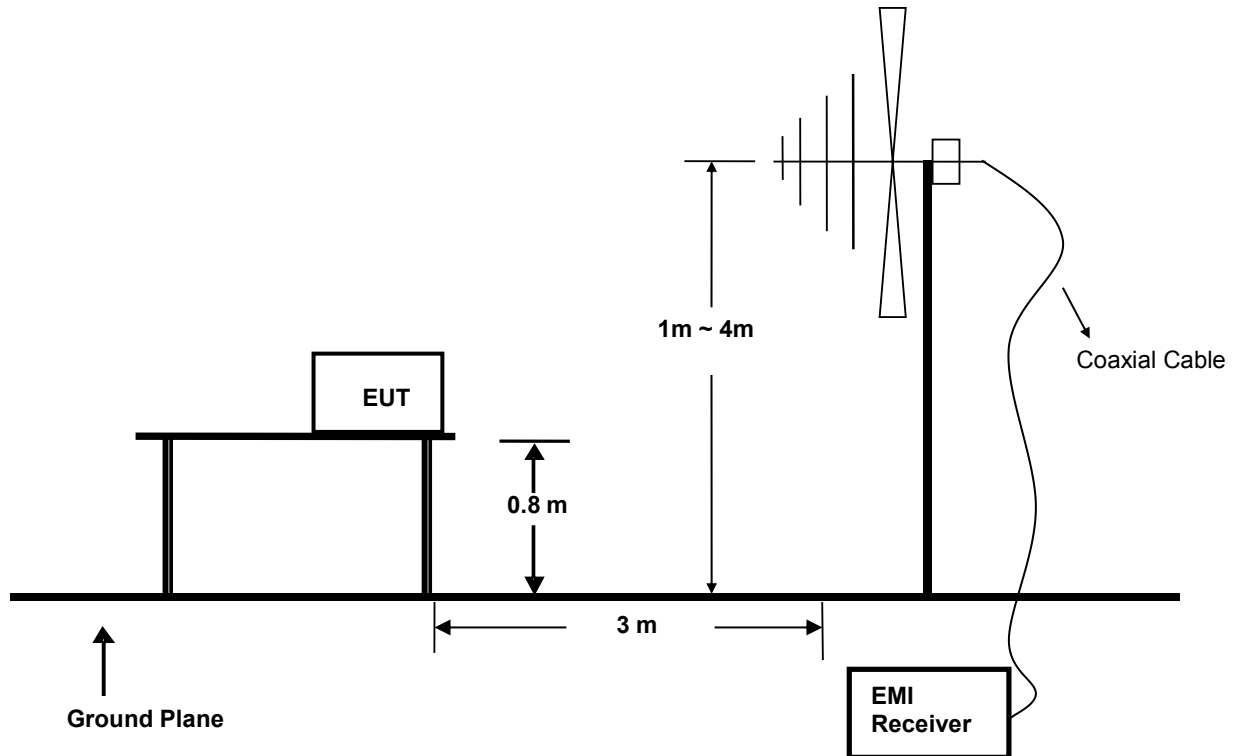
| Item | Test Equipment                | Manufacturer | Model No. | Serial No. | Last Cal. |
|------|-------------------------------|--------------|-----------|------------|-----------|
| 1    | Voltage dips and up generator | 3CTEST       | VDG-1105G | EC0171014  | 2024/4/13 |

3.14.Voltage Short Interruptions

| Item | Test Equipment                | Manufacturer | Model No. | Serial No. | Last Cal. |
|------|-------------------------------|--------------|-----------|------------|-----------|
| 1    | Voltage dips and up generator | 3CTEST       | VDG-1105G | EC0171014  | 2024/4/13 |

## 4. RADIATED EMISSION MEASUREMENT

### 4.1. Block Diagram of Test Setup



### 4.2. Measuring Standard

EN 55032:2015+A11:2020

### 4.3. Radiated Emission Limits

EN 55032 Limits:

All emanations from a class B device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified below:

| FREQUENCY<br>(MHz) | DISTANCE<br>(Meters) | FIELD STRENGTHS LIMIT<br>(dB $\mu$ V/m) |
|--------------------|----------------------|-----------------------------------------|
| 30 ~ 230           | 3                    | 40                                      |
| 230 ~ 1000         | 3                    | 47                                      |

Note: (1) The smaller limit shall apply at the combination point between two frequency bands.

(2) Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the EUT.

#### 4.4.EUT Configuration on Test

The EN 55032 regulations test method must be used to find the maximum emission during radiated emission measurement.

#### 4.5.Operating Condition of EUT

4.5.1 Turn on the power.

4.5.2 After that, let the EUT work in test mode (ON) and measure it.

#### 4.6.Test Procedure

The EUT is placed on a turntable, which is 0.8 meter high above the ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna, which is mounted on a antenna tower. The antenna can be moved up and down from 1 to 4 meters to find out the maximum emission level. By-log antenna is used as a receiving antenna. Both horizontal and vertical polarization of the antenna is set on test.

The bandwidth of the Receiver is set at 120kHz.

The frequency range from 30MHz to 1000MHz is investigated.

#### 4.7.Test Results

**PASS.**

The test result please refer to the next page.

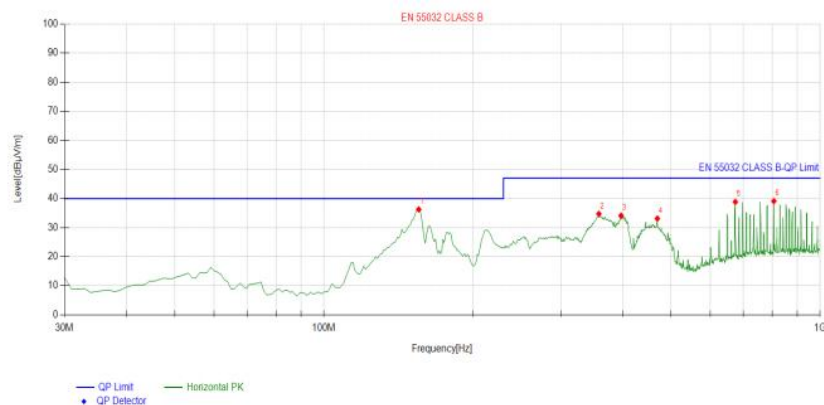
|                                 |                |                          |              |
|---------------------------------|----------------|--------------------------|--------------|
| <b>Model No.</b>                | YFTC02-2C1A78W | <b>Test Date</b>         | May 12, 2025 |
| <b>Environmental Conditions</b> | 24°C/ 56% RH   | <b>Test Mode</b>         | On           |
| <b>Pol</b>                      | Vertical       | <b>Detector Function</b> | Quasi-peak   |
| <b>Test Engineer</b>            | Andy           | <b>Distance</b>          | 3m           |



Suspected List

| NO. | Freq. [MHz] | Factor [dB] | Reading [dBμV/m] | Level [dBμV/m] | Limit [dBμV/m] | Margin [dB] | Height [cm] | Angle [°] | Polarity |
|-----|-------------|-------------|------------------|----------------|----------------|-------------|-------------|-----------|----------|
| 1   | 60.1001     | -18.29      | 50.97            | 32.68          | 40.00          | 7.32        | 100         | 332       | Vertical |
| 2   | 155.25525   | -16.86      | 55.90            | 39.04          | 40.00          | 0.96        | 100         | 9         | Vertical |
| 3   | 311.58158   | -17.18      | 46.09            | 28.91          | 47.00          | 18.09       | 100         | 337       | Vertical |
| 4   | 459.16916   | -13.90      | 44.26            | 30.36          | 47.00          | 16.64       | 100         | 332       | Vertical |
| 5   | 674.72472   | -9.72       | 45.41            | 35.69          | 47.00          | 11.31       | 100         | 97        | Vertical |
| 6   | 759.19919   | -8.39       | 43.37            | 34.98          | 47.00          | 12.02       | 100         | 257       | Vertical |

|                                 |                |                          |              |
|---------------------------------|----------------|--------------------------|--------------|
| <b>Model No.</b>                | YFTC02-2C1A78W | <b>Test Date</b>         | May 12, 2025 |
| <b>Environmental Conditions</b> | 24°C/ 56% RH   | <b>Test Mode</b>         | On           |
| <b>Pol</b>                      | Horizontal     | <b>Detector Function</b> | Quasi-peak   |
| <b>Test Engineer</b>            | Andy           | <b>Distance</b>          | 3m           |

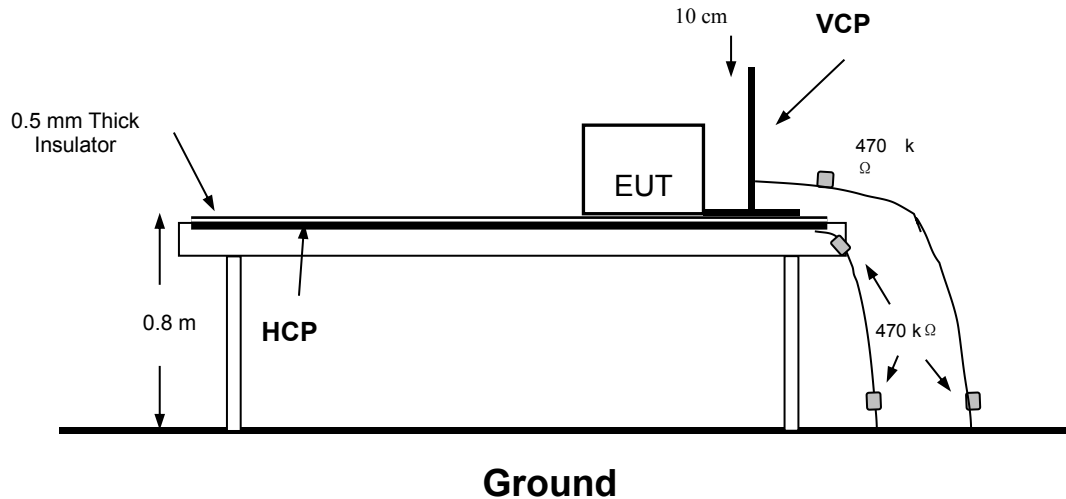


Suspected List

| NO. | Freq. [MHz] | Factor [dB] | Reading [dBμV/m] | Level [dBμV/m] | Limit [dBμV/m] | Margin [dB] | Height [cm] | Angle [°] | Polarity   |
|-----|-------------|-------------|------------------|----------------|----------------|-------------|-------------|-----------|------------|
| 1   | 155.25525   | -16.86      | 53.12            | 36.26          | 40.00          | 3.74        | 100         | 336       | Horizontal |
| 2   | 358.18818   | -15.94      | 50.67            | 34.73          | 47.00          | 12.27       | 100         | 44        | Horizontal |
| 3   | 397.02702   | -15.15      | 49.27            | 34.12          | 47.00          | 12.88       | 100         | 40        | Horizontal |
| 4   | 469.84985   | -13.52      | 46.64            | 33.12          | 47.00          | 13.88       | 100         | 30        | Horizontal |
| 5   | 674.72472   | -9.72       | 48.57            | 38.85          | 47.00          | 8.15        | 100         | 292       | Horizontal |
| 6   | 806.77677   | -7.48       | 46.60            | 39.12          | 47.00          | 7.88        | 100         | 282       | Horizontal |

## 5. ELECTROSTATIC DISCHARGE IMMUNITY TEST

### 5.1. Block Diagram of Test Setup



### 5.2. Test Standard

EN 55035: 2017+A11:2020,

Severity Level: 3 / Air Discharge:  $\pm 8\text{KV}$ , Level: 2 / Contact Discharge:  $\pm 4\text{KV}$ )

### 5.3. Severity Levels and Performance Criterion

#### 5.3.1. Severity level

| Level | Test Voltage<br>Contact Discharge (KV) | Test Voltage<br>Air Discharge (KV) |
|-------|----------------------------------------|------------------------------------|
| 1.    | $\pm 2$                                | $\pm 2$                            |
| 2.    | $\pm 4$                                | $\pm 4$                            |
| 3.    | $\pm 6$                                | $\pm 8$                            |
| 4.    | $\pm 8$                                | $\pm 15$                           |
| X     | Special                                | Special                            |

#### 5.3.2. Performance Criterion: **B**

### 5.4. EUT Configuration on Test

The configuration of EUT is listed in Section 3.7.

## 5.5.Operating Condition of EUT

5.4.1.Setup the EUT as shown on Section 5.1.

5.4.2.Turn on the power of all equipments.

5.4.3.Let the EUT work in measuring mode (ON) and measure it.

## 5.6.Test Procedure

### 5.6.1.Air Discharge

This test is done on a non-conductive surface. The round discharge tip of the discharge electrode shall be approached as fast as possible to touch the EUT.

After each discharge, the discharge electrode shall be removed from the EUT.

The generator is then re-triggered for a new single discharge and repeated 10 times for each pre-selected test point. This procedure shall be repeated until all the air discharge completed

### 5.6.2.Contact Discharge

All the procedure shall be same as Section 5.6.1. Except that the tip of the discharge electrode shall touch the EUT before the discharge switch is operated.

### 5.6.3.Indirect Discharge For Horizontal Coupling Plane

At least 10 single discharges (in the most sensitive polarity) shall be applied at the front edge of each HCP opposite the center point of each unit (if applicable) of the EUT and 0.1m from the front of the EUT. The long axis of the discharge electrode shall be in the plane of the HCP and perpendicular to its front edge during the discharge.

### 5.6.4.Indirect Discharge For Vertical Coupling Plane

At least 10 single discharge (in the most sensitive polarity) shall be applied to the center of one vertical edge of the coupling plane. The coupling plane, of dimensions 0.5m X 0.5m, is placed parallel to, and positioned at a distance of 0.1m from the EUT.

Discharges shall be applied to the coupling plane, with this plane in sufficient different positions that the four faces of the EUT are completely illuminated.

## 5.7.Test Results

**PASS.**

Please refer to the following pages



# Electrostatic Discharger Test Results

|                      |                                                                                         |                    |              |
|----------------------|-----------------------------------------------------------------------------------------|--------------------|--------------|
| <b>Standard</b>      | <input type="checkbox"/> IEC 61000-4-2 <input checked="" type="checkbox"/> EN 61000-4-2 |                    |              |
| <b>Applicant</b>     | Shenzhen Yifan Tong Technology Co.,Ltd                                                  |                    |              |
| <b>EUT</b>           | Car Charger                                                                             | <b>Temperature</b> | 24℃          |
| <b>M/N</b>           | YFTC02-2C1A78W                                                                          | <b>Humidity</b>    | 53%          |
| <b>Criterion</b>     | B                                                                                       | <b>Pressure</b>    | 1021mbar     |
| <b>Test Mode</b>     | ON                                                                                      | <b>Test Date</b>   | May 12, 2025 |
| <b>Test Engineer</b> | Andy                                                                                    |                    |              |

## Air Discharge

| Test Points | Test Levels                         |                                     |                                     | Results                             |                          |                                                                  |
|-------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|------------------------------------------------------------------|
|             | ± 2kV                               | ± 4kV                               | ± 8kV                               | Passed                              | Fail                     | Performance Criterion                                            |
| Front       | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> A <input checked="" type="checkbox"/> B |
| Back        | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> A <input checked="" type="checkbox"/> B |
| Left        | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> A <input checked="" type="checkbox"/> B |
| Right       | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> A <input checked="" type="checkbox"/> B |
| Top         | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> A <input checked="" type="checkbox"/> B |
| Bottom      | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> A <input checked="" type="checkbox"/> B |

## Contact Discharge

| Test Points | Test Levels                         |                                     | Results                             |                          |                                                                  |
|-------------|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|------------------------------------------------------------------|
|             | ± 2 kV                              | ±4 kV                               | Passed                              | Fail                     | Performance Criterion                                            |
| Front       | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> A <input checked="" type="checkbox"/> B |
| Back        | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> A <input checked="" type="checkbox"/> B |
| Left        | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> A <input checked="" type="checkbox"/> B |
| Right       | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> A <input checked="" type="checkbox"/> B |
| Top         | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> A <input checked="" type="checkbox"/> B |
| Bottom      | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> A <input checked="" type="checkbox"/> B |

## Discharge To Horizontal Coupling Plane

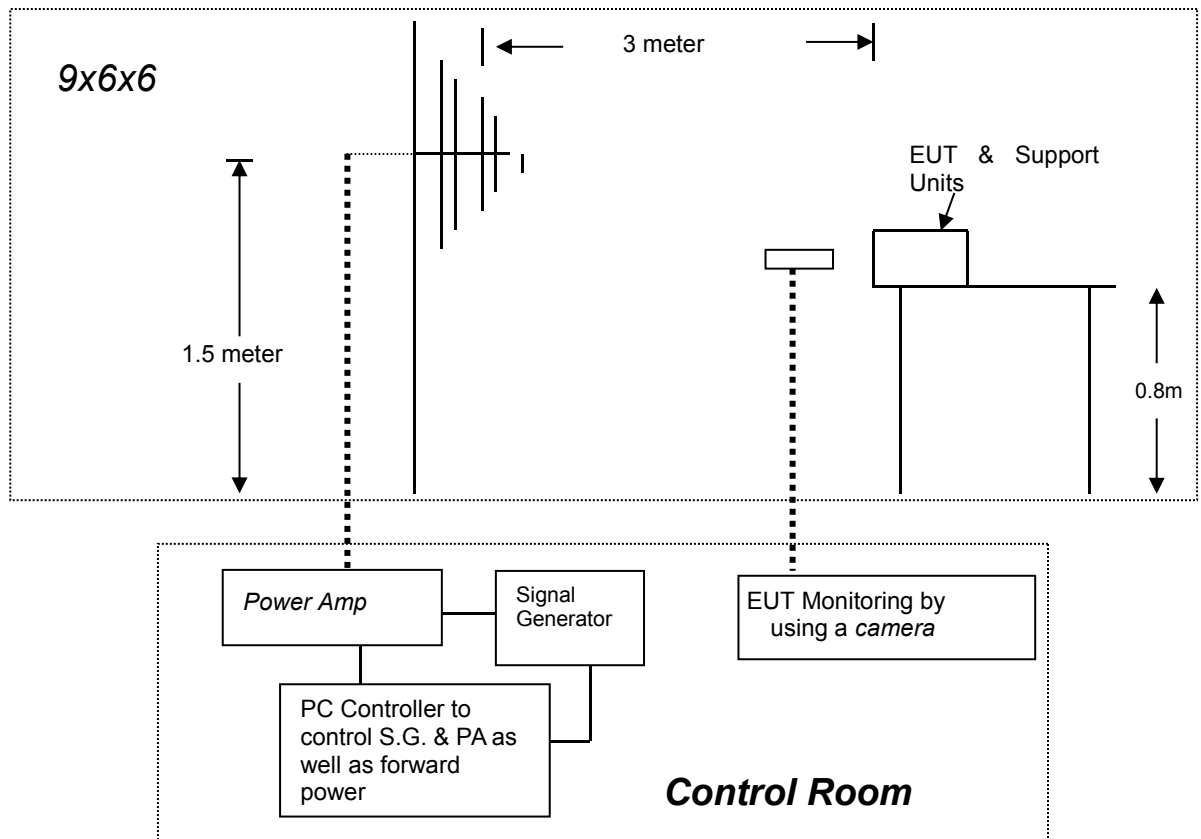
| Side of EUT | Test Levels                         |                                     | Results                             |                          |                                                                  |
|-------------|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|------------------------------------------------------------------|
|             | ± 2 kV                              | ± 4 kV                              | Passed                              | Fail                     | Performance Criterion                                            |
| Front       | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> A <input checked="" type="checkbox"/> B |
| Back        | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> A <input checked="" type="checkbox"/> B |
| Left        | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> A <input checked="" type="checkbox"/> B |
| Right       | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> A <input checked="" type="checkbox"/> B |

## Discharge To Vertical Coupling Plane

| Side of EUT | Test Levels                         |                                     | Results                             |                          |                                                                  |
|-------------|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|------------------------------------------------------------------|
|             | ± 2 kV                              | ± 4 kV                              | Passed                              | Fail                     | Performance Criterion                                            |
| Front       | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> A <input checked="" type="checkbox"/> B |
| Back        | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> A <input checked="" type="checkbox"/> B |
| Left        | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> A <input checked="" type="checkbox"/> B |
| Right       | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> A <input checked="" type="checkbox"/> B |

## 6. RF FIELD STRENGTH SUSCEPTIBILITY TEST

### 6.1. Block Diagram of Test



### 6.2. Test Standard

EN 55035: 2017+A11:2020,

(EN 61000-4-3: 2020 Severity Level: 2, 3V / m)

### 6.3. Severity Levels and Performance Criterion

#### 6.3.1. Severity Levels

| Level | Field Strength (V/m) |
|-------|----------------------|
| 1.    | 1                    |
| 2.    | 3                    |
| 3.    | 10                   |
| X.    | Special              |

#### 6.3.2. Performance Criterion: A

#### 6.4.EUT Configuration on Test

The configuration of the EUT is same as Section 3.8.

#### 6.5.Operating Condition of EUT

Same as radiated emission measurement, which is listed in Section 4.5, except the test setup replaced as Section 6.1.

#### 6.6.Test Procedure

The EUT are placed on a table, which is 0.8 meter high above the ground. The EUT is set 3 meters away from the transmitting antenna, which is mounted on an antenna tower. Both horizontal and vertical polarization of the antenna is set on test. Each of the four sides of the EUT must be faced this transmitting antenna and measured individually. In order to judge the EUT performance, a CCD Recording is used to monitor its screen. All the scanning conditions are as following:

| Condition of Test         | Remark                  |
|---------------------------|-------------------------|
| -----                     | -----                   |
| 1. Fielded Strength       | 3V/m (Severity Level 2) |
| 2. Radiated Signal        | Unmodulated             |
| 3. Scanning Frequency     | 80-1000MHz              |
| 4. Sweep time of radiated | 0.0015 Decade/s         |
| 5. Dwell Time             | 3 Sec.                  |

#### 6.7.Test Results

**PASS.**

Please refer to the following page.

# RF Field Strength Susceptibility Test Results

|                 |                                                                                                              |               |              |
|-----------------|--------------------------------------------------------------------------------------------------------------|---------------|--------------|
| Standard        | <input type="checkbox"/> IEC 61000-4-3 <input checked="" type="checkbox"/> EN 61000-4-3                      |               |              |
| Applicant       | Shenzhen Yifan Tong Technology Co.,Ltd                                                                       |               |              |
| EUT             | Car Charger                                                                                                  | Temperature   | 24℃          |
| M/N             | YFTC02-2C1A78W                                                                                               | Humidity      | 53%          |
| Field Strength  | 3 V/m                                                                                                        | Criterion     | A            |
| Test Mode       | ON                                                                                                           | Test Engineer | Andy         |
| Frequency Range | 80 MHz to 1000 MHz                                                                                           | Test Date     | May 12, 2025 |
| Modulation      | <input type="checkbox"/> None <input type="checkbox"/> Pulse <input checked="" type="checkbox"/> AM 1KHz 80% |               |              |
| Steps           | 1%                                                                                                           |               |              |

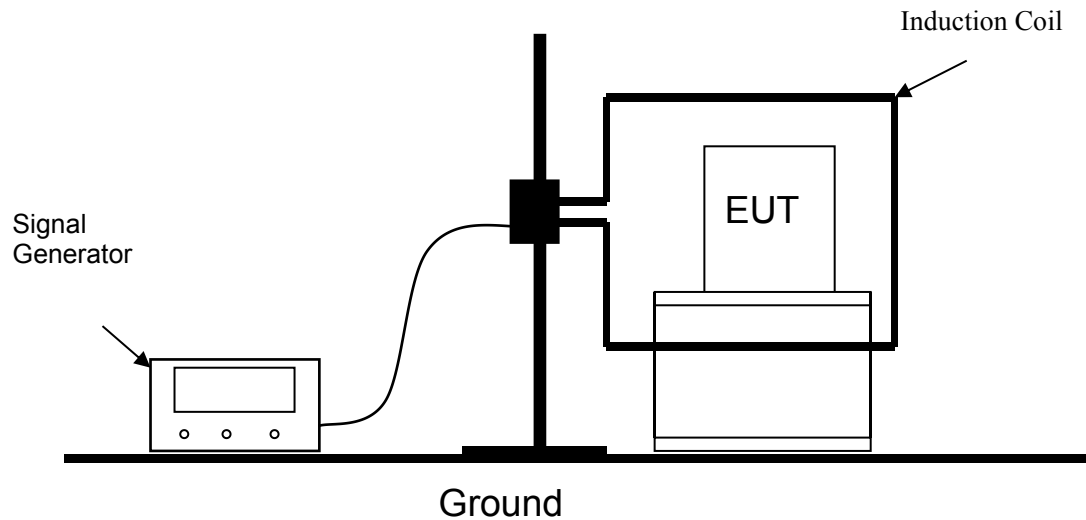
|       | Horizontal | Vertical |
|-------|------------|----------|
| Front | PASS       | PASS     |
| Right | PASS       | PASS     |
| Rear  | PASS       | PASS     |
| Left  | PASS       | PASS     |

Test Equipment:  
1. Signal Generator: 2031 (MARCONI)  
2. Power Amplifier: 500A100 & 100W/1000M1 (A&R)  
3. Power Antenna: 3108 (EMCO) & AT1080 (A&R)  
4. Field Monitor: FM2000 (A&R)

Note:

## 7. MAGNETIC FIELD SUSCEPTIBILITY TEST

### 7.1. Block Diagram of Test Setup



### 7.2. Test Standard

EN 55035: 2017+A11:2020,

(EN 61000-4-8: 2010, Severity Level: Level 1, 1A / m)

### 7.3. Severity Levels and Performance Criterion

#### 7.3.1. Severity Levels

| Level | Field Strength (A/m) |
|-------|----------------------|
| 1     | 1                    |
| 2     | 3                    |
| 3     | 10                   |
| 4     | 30                   |
| 5     | 100                  |
| X     | Special              |

#### 7.3.2. Performance Criterion: A

### 7.4. EUT Configuration on Test

The configuration of the EUT is same as Section 3.12.

### 7.5. Test Procedure

The EUT is placed in the middle of a induction coil (1\*1m), under which is a 1\*1\*0.1m (high) table, this small table is also placed on a larger table, 0.8 m above the ground. Both horizontal and vertical polarization of the induction coil is set on test, so that each side of the EUT is affected by the magnetic field. Also can reach the same aim by change the position of the EUT.

### 7.6. Test Results

**PASS.**

Please refer to the following page.

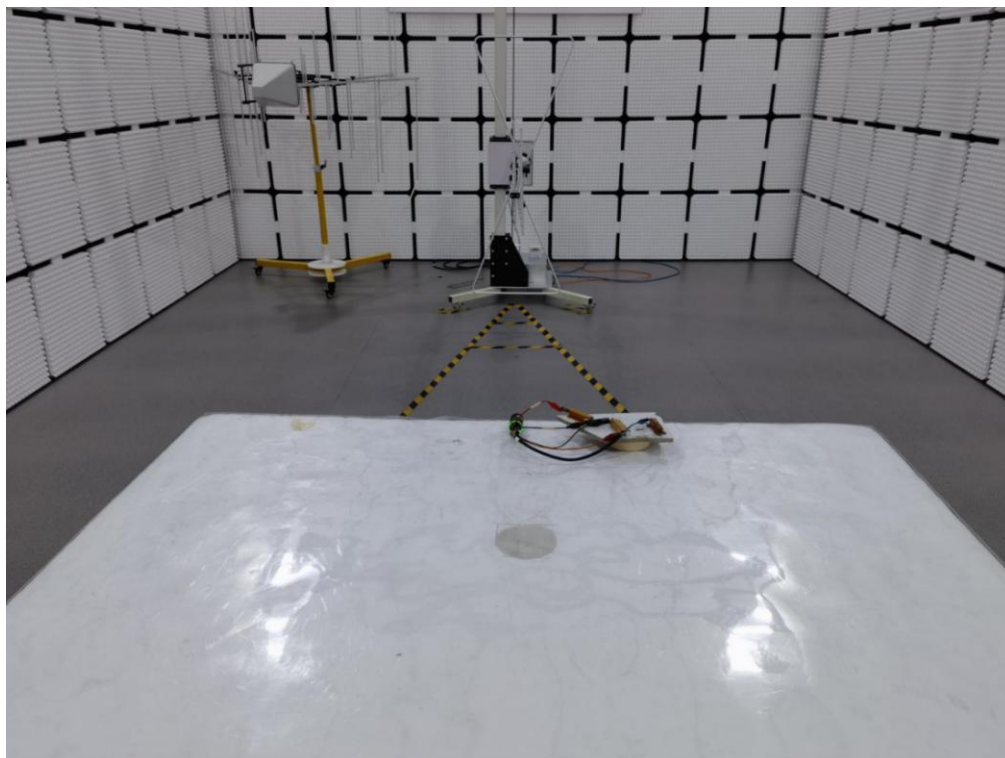
| Magnetic Field Immunity Test Result |                                                                                         |             |              |
|-------------------------------------|-----------------------------------------------------------------------------------------|-------------|--------------|
| Standard                            | <input type="checkbox"/> IEC 61000-4-8 <input checked="" type="checkbox"/> EN 61000-4-8 |             |              |
| Applicant                           | Shenzhen Yifan Tong Technology Co.,Ltd                                                  |             |              |
| EUT                                 | Car Charger                                                                             | Temperature | 24℃          |
| M/N                                 | YFTC02-2C1A78W                                                                          | Humidity    | 53%          |
| Test Mode                           | ON                                                                                      | Criterion   | A            |
| Test Engineer                       | Andy                                                                                    | Test Date   | May 12, 2025 |

| Test Level<br>(A/M) | Testing<br>Duration | Coil Orientation | Criterion | Result |
|---------------------|---------------------|------------------|-----------|--------|
| 1                   | 5 mins              | X                | A         | PASS   |
| 1                   | 5 mins              | Y                | A         | PASS   |
| 1                   | 5 mins              | Z                | A         | PASS   |

Note:

## 8. PHOTOGRAPH

### 8.1.Photo of Radiated Measurement





## 9. EXTERNAL AND INTERNAL PHOTOS OF THE EUT



Fig.1



Fig.2



Fig.3

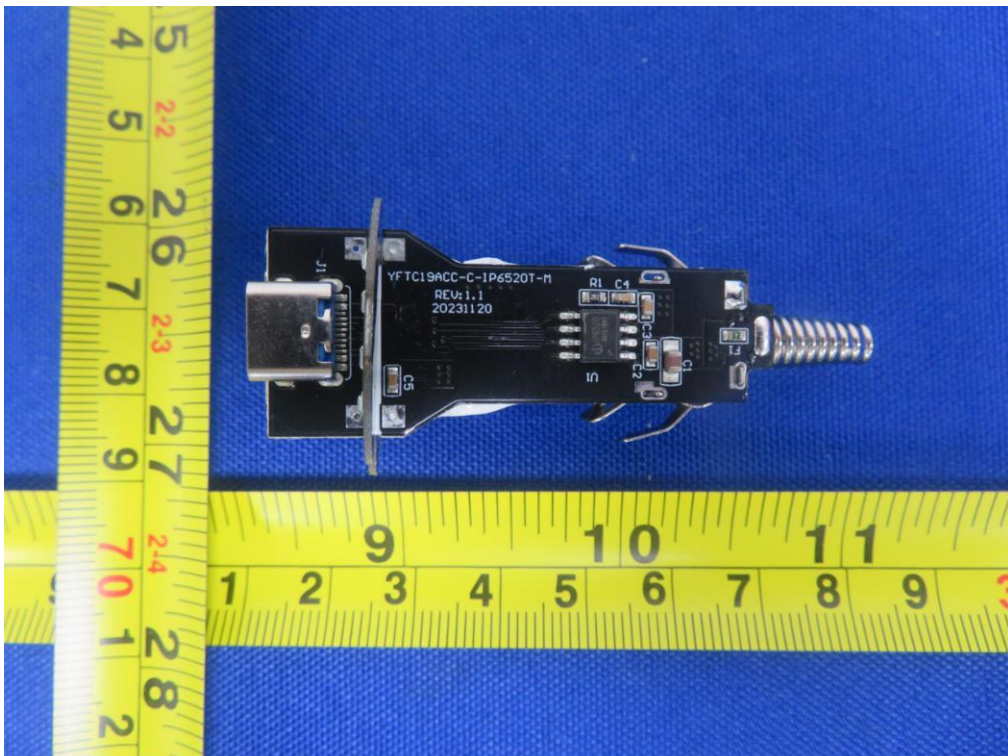


Fig.4



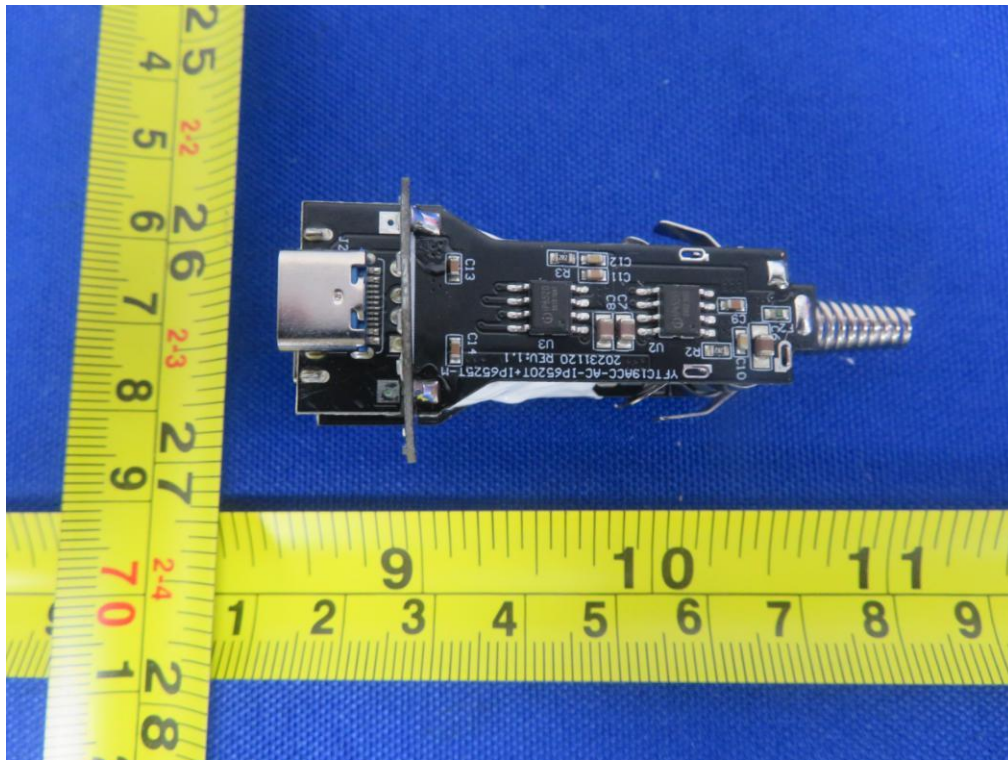


Fig.5

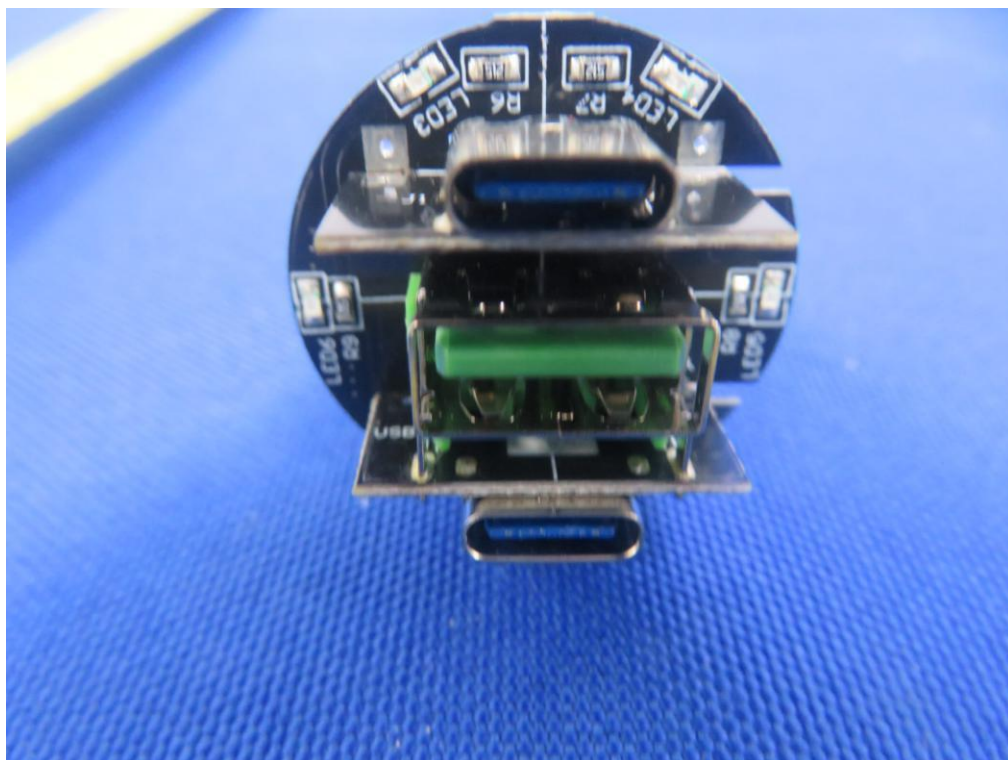


Fig.6

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