



# **FCC TEST REPORT**

## **For**

### **Shenzhen lingyike technology co., ltd**

### **Car charger**

Model No.: BK-348,BK-349,BK-350,BK-351,BK-352,BK-353,BK-354,BK-355,  
BK-356,BK-357,BK-358,BK358-PD,BK358-2PD,BK-359,  
BK359-1A2C,BK359-3A2C BK-360,BK-361,BK-362,BK362-PD,  
BK362-2PD,BK-363,BK363-PD,BK363-2PD,BK-364,BK-365,  
BK365-PD,BK365-2PD,BK-366,BK-367,BK-368, BK-369,BK-370,  
TE-P1,TE-P2,TE-P3,TE-P4,TE-P6,TE-P8,TE-P20,TE-P21,TE-P22,  
TE-P22,TE-P23 TE-P26,TE-P27,TE-P58,TE-P31,TE-P32,TE-092,  
TE-093PD,TE-094,TE-096,WKN-707,WKN-708,KC-08,TE-201,  
TE-202,TE-328, TE-311,TE-330,TE-336,TE-337,TE-338,TE-339,  
TE-348 TE-348PD TE-349, TE-350,TE-368,TE-369,TE-370,  
TE-371,TE-395,TE-681,TE-682,TE-683,TE-684,PD Car Charger,  
WGS-G28PD

Prepared for: Shenzhen lingyike technology co., ltd  
Address: B127 Huitong Communication Market, Huaqiang North Street, Futian  
District, Shenzhen

Prepared By: Guangdong Lintek Certification Group Co., Ltd.  
Address: 302, Building B, Xunli Science and Technology Park, No.36 Zhangge  
Road, Fucheng Street, Longhua District, Shenzhen, Guangdong  
Province, China

Report Number : LTR23032366F01  
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Date of Test : Mar. 25, 2023- Apr. 04, 2023  
Date of Report : Apr. 04, 2023  
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## TEST REPORT DECLARATION

Applicant : Shenzhen lingyike technology co., ltd  
Manufacturer : Shenzhen lingyike technology co., ltd  
EUT Description : Car charger  
(A) Model No. : See page 1  
(B) Trademark : N/A  
(C) Ratings Supply : INPUT:DC12-32V  
USB-A:DC5V3.5A DC 9V3.5A DC12V2.8A(QC3.0)  
USB-C DC 5V3.5 DC A9V3.5A DC 12V2.8A(PD30W)  
USB-A+USB-B+Type-CTotalOutputDC5V3.1AMax  
(D) Test Voltage : DC12V  
Measurement Standard Used:  
FCC Rules and Regulations Part 15 Subpart B Class B,  
ANSI C63.4-2014

The device described above is tested by Guangdong Lintek Certification Group Co., Ltd. to determine the maximum emission levels emanating from the device and the severe levels of the device can endure and its performance criterion. The test results are contained in this test report and Guangdong Lintek Certification Group Co., Ltd. is assumed full responsibility for the accuracy and completeness of test. Also, this report shows that the EUT is technically compliant with the FCC Part 15 Subpart B Class B requirements.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Guangdong Lintek Certification Group Co., Ltd.

Tested by (name + signature).....: Sunny Yuan  
Test Engineer

Approved by (name + signature).....: Kevin Chen  
Project Manager

Date of issue.....: Apr. 04, 2023





## 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			
Description of Test Item	Standard	Limits	Results
Power Line Conducted Emission Test	FCC Part 15 ANSI C63.4: 2014	--	N/A
Radiated Emission Test	FCC Part 15 ANSI C63.4: 2014	Class B	PASS
N/A is an abbreviation for Not Applicable.			



## 2. GENERAL INFORMATION

### 2.1. Description of Device (EUT)

Description : Car charger

Classification : Class III

Model Number : See page 1

DIFF. : All model just power difference

Trademark : N/A

Applicant : Shenzhen lingyike technology co., ltd

Address : B127 Huitong Communication Market, Huaqiang North  
Street, Futian District, Shenzhen

Manufacturer : Shenzhen lingyike technology co., ltd

Address : B127 Huitong Communication Market, Huaqiang North  
Street, Futian District, Shenzhen

Sample Type : Prototype production



## 2.2. Block Diagram of connection between EUT and simulators



**EUT: Car charger**

## 2.3. Test Facility

### 2.3.1. Laboratory Name:

Guangdong Lintek Certification Group Co., Ltd.

### 2.3.2. Site Location :

302, Building B, Xunli Science and Technology Park, No.36 Zhangge Road,  
Fucheng Street, Longhua District, Shenzhen, Guangdong Province, China

## 2.4. Measurement Uncertainty

(95% confidence levels, k=2)

Test Item	Uncertainty	U <sub>cispr</sub>
Uncertainty for Conduction emission test	2.50dB	3.8 dB
Uncertainty for Radiation Emission test	3.04 dB (Distance: 3m Polarize: V)	5.2 dB
	3.02 dB (Distance: 3m Polarize: H)	
Uncertainty for Power Clamp Test	3.94 dB	4.5 dB
Uncertainty for Flicker test	0.05%	N/A
Uncertainty for Harmonic test	1.8%	N/A



## 2.5. Test mode Description

No.	Test Mode
1.	Normal working
Note:	

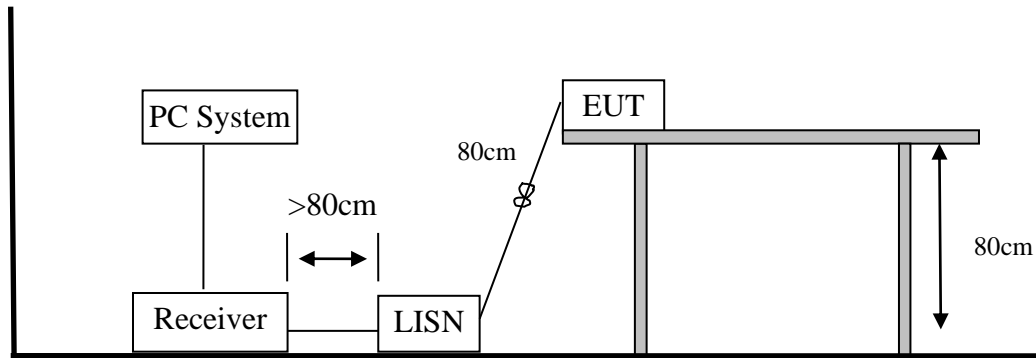


### 3. POWER LINE CONDUCTED EMISSION TEST

#### 3.1. Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESCI	100873	May.07, 23	1 Year
2.	L.I.S.N.#1	Schwarzbeck	NSLK8126	8126-466	May.07, 23	1 Year
3.	RF Cable	Schwarzbeck	Cable 2	2M	May.07, 23	1 Year
4.	Coaxial Switch	Schwarzbeck	CX-210	N/A	May.07, 23	1 Year
5.	Pulse Limiter	Schwarzbeck	9516F	9618	May.07, 23	1 Year

#### 3.2. Block Diagram of Test Setup



#### 3.3. Conducted Disturbance at Mains Terminals Test Standard and Limit

Frequency	At mains terminals (dB $\mu$ V)	
	Quasi-peak Level	Average Level
150kHz ~ 500kHz	66 ~ 56 *	56 ~ 46 *
500kHz ~ 5MHz	56	46
5MHz ~ 30MHz	60	50

Notes: 1. Emission level=Read level+LISN factor-Preamp factor+Cable loss

2\* Decreasing linearly with logarithm of frequency.

3. The lower limit shall apply at the transition frequencies.

#### 3.4. EUT Configuration on Test

The following equipment are installed on Power Line Conducted Emission Test to meet the commission requirement and operating regulations in a manner which tends to





maximize its emission characteristics in a normal application.

### 3.5. Operating Condition of EUT

3.5.1. Setup the EUT as shown in section 3.2.

3.5.2. Turned on the power of all equipments.

3.5.3. Let the EUT worked in test mode 15 minutes after taking the test.

### 3.6. Test Procedure

The EUT was placed on a non-metallic table, 80cm above the ground plane. The EUT Power connected to the power mains through a line impedance stabilization network (L.I.S.N. #1). The power line was checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to ANSI C63.4 on Conducted Disturbance at Mains Terminals test.

The bandwidth of test receiver (R & S ESCI) is set at 10kHz.

The frequency range from 150kHz to 30MHz is checked. The test result are reported on Section 3.7.

### 3.7. Conducted Disturbance at Mains Terminals Test Results

N/A



## 4. RADIATED EMISSION TEST

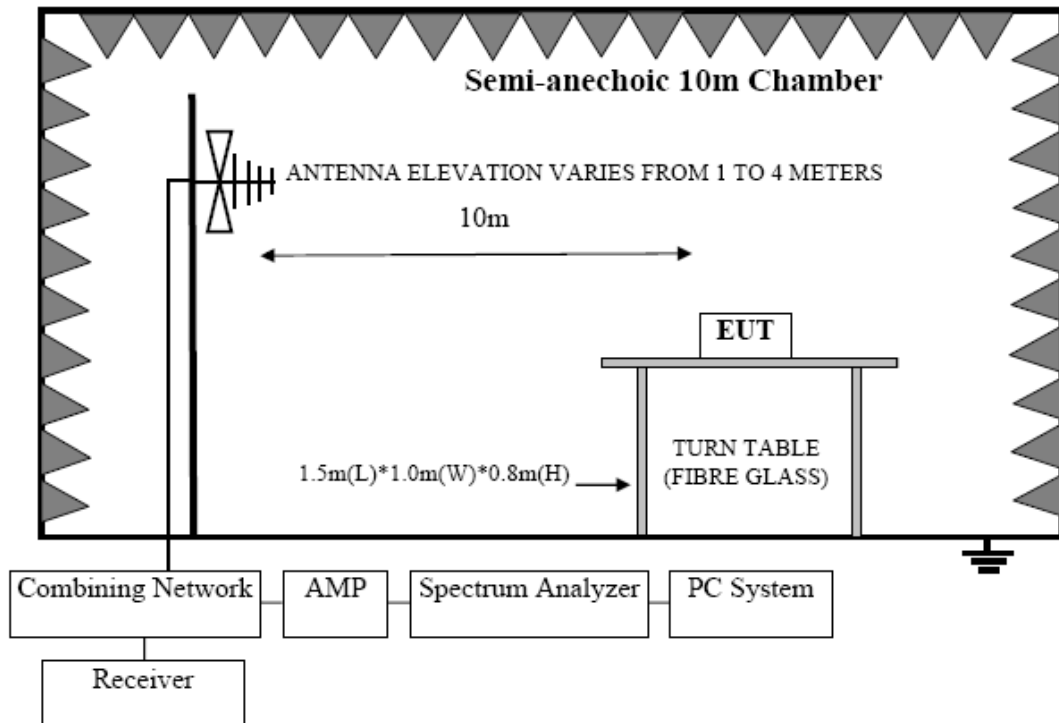
### 4.1. Test Equipments

#### 4.1.1. For frequency range 30MHz~1000MHz (At Semi Anechoic Chamber)

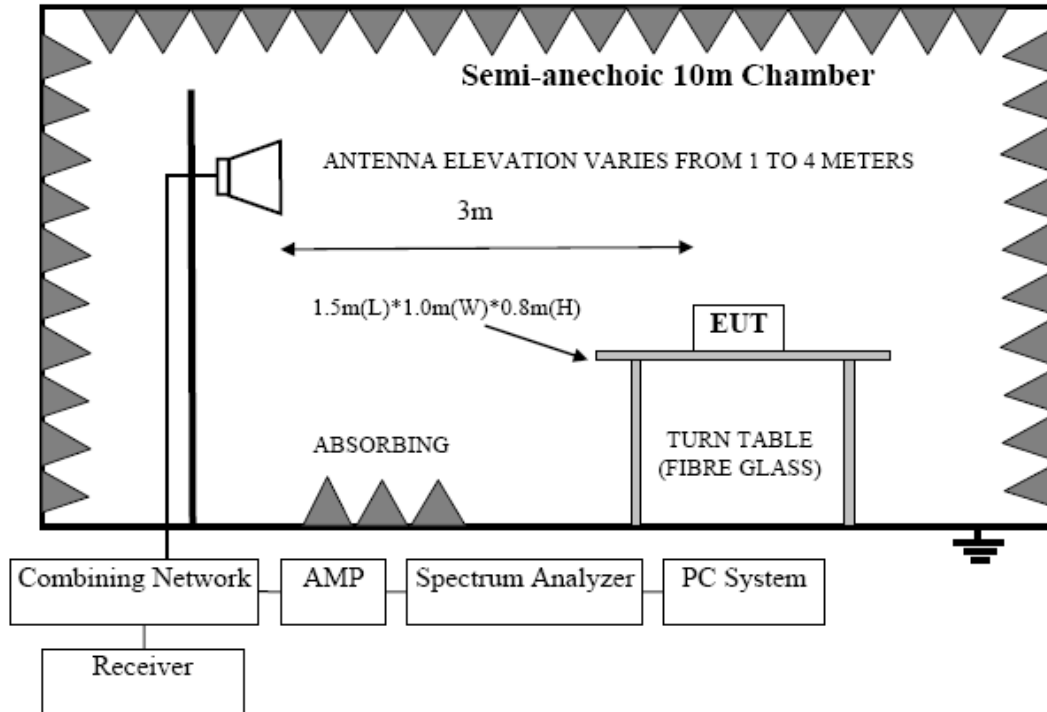
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Test Receiver	Rohde&Schwarz	ESCI	101165	May.07, 23	1 Year
2	Amplifier	QuieTek	AP/0100A	0506005	May.07, 23	1 Year
3	Coaxial Switch	ANRITSUCORP	MP5913	6200615651	N/A	N/A
4	Bilog Antenna	Schwarzbeck	VULB 9168	9168-438	May.07, 23	1 Year
5	Spectrum Analyzer	Agilent	E4407B	MY49510055	May.07, 23	1 Year
6	Horn Antenna	Schwarzbeck	BBHA 9120 D	BBHA 9120 D(1201)	May.07, 23	1 Year
7	Amplifier	Quietek	AP-180C	CHM-0602012	May.07, 23	1 Year

## 4.2. Block Diagram of Test Setup

### 4.2.1. In Semi Anechoic Chamber (3m) Test Setup Diagram for 30MHz~1000MHz



#### 4.2.2. In Semi Anechoic Chamber (3m) Test Setup Diagram for 1000MHz~6000MHz



#### 4.3. Radiated Emission Limit

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

Frequency MHz	Distance (Meters)	Field Strengths Limits dB( $\mu$ V)/m
30 ~ 88	3	40.0
88 ~ 216	3	43.5
216 ~ 960	3	46.0
960 ~ 1000	3	54.0
1000 ~ 6000	3	74(Peak) 54(Average)

Remark: (1) Emission level = Read level+Antenna Factor-Preamplifier Factor +Cable Loss  
(2) The smaller limit shall apply at the cross point between two frequency bands.  
(3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.



#### 4.4. EUT Configuration on Test

The following equipment are installed on Radiated Emission Test to meet the commission requirements and operating regulations in a manner that tends to maximize its emission characteristics in normal application.

4.4.1. Support Equipments : As Tested Supporting System Detail, in Section 2.2.

#### 4.5. Operating Condition of EUT

4.5.1. Setup the EUT and simulator as shown as Section 5.2.

4.5.2. Turned on the power of all equipment.

4.5.3. Let the EUT work in test mode 15 minutes after taking the test.

#### 4.6. Test Procedure

The EUT was placed on a non-metallic table, 80 cm above the ground plane inside a semi-anechoic chamber. An antenna was located 3m from the EUT on an adjustable mast. A pre-scan was first performed in order to find prominent radiated emissions. For final emissions measurements at each frequency of interest, the EUT were rotated and the antenna height was varied between 1m and 4m in order to maximize the emission. Measurements in both horizontal and vertical polarities were made and the data was recorded. In order to find the maximum emission, the relative positions of equipments and all the interface cables were changed according to EN ANSI C63.4 on Radiated Emission test.

The bandwidth setting on the test receiver (Rohde&Schwarz Test Receiver ESCI) is 120 kHz.

#### 4.7. Test result

**PASS.** (All emissions not reported below are too low against the prescribed limits. Only report the worst result for all 4 models)

The EUT with the following test mode was tested and read QP values, the test results are listed in next pages.

Temperature: 24.2°C      Humidity: 54%

The details of test mode is as follows :

No.	Test Mode
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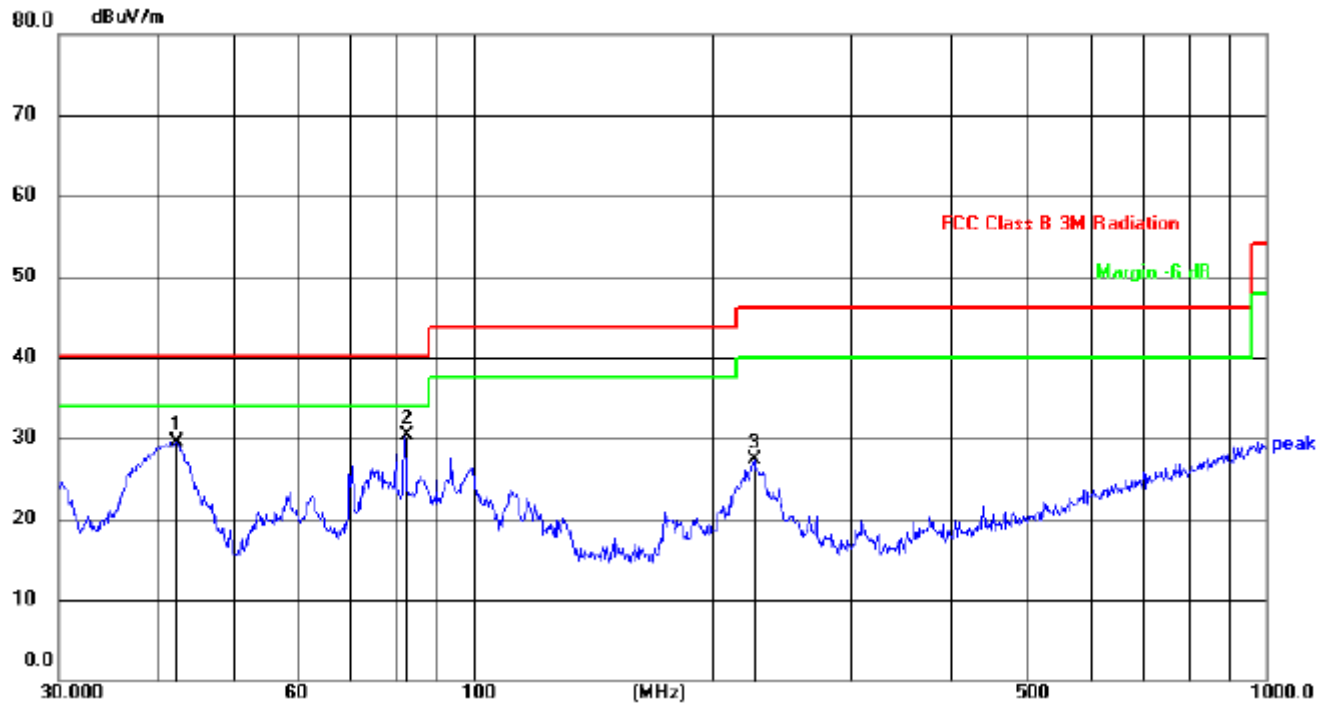
1.	Normal working
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**For frequency range 1GHz~6GHz**

The highest frequency of the internal sources of the EUT is less than 108 MHz, the measurement shall only be made up to 1 GHz. So the frequency rang 1GHz-6GHz radiation test not applicable.



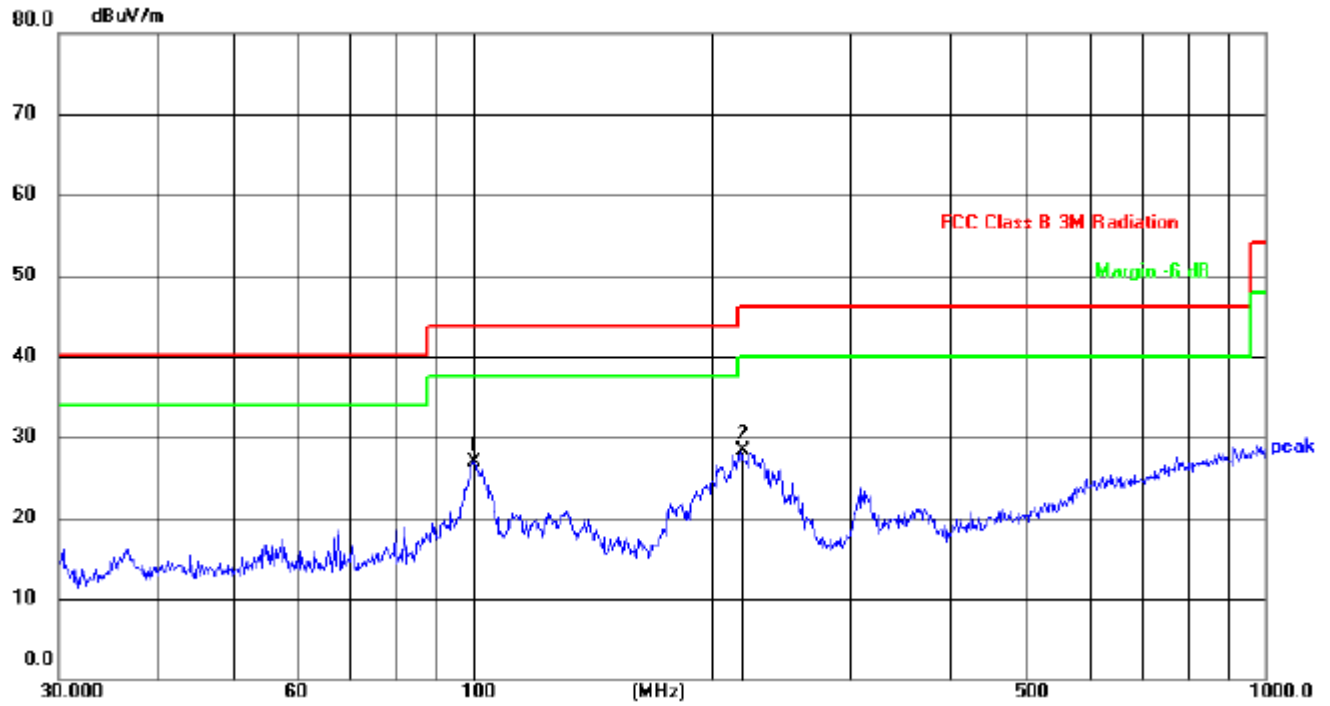
### Vertical



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	42.3022	50.25	-20.74	29.51	40.00	-10.49	peak				
2	82.0706	50.47	-20.24	30.23	40.00	-9.77	peak				
3	226.0994	45.48	-18.23	27.25	46.00	-18.75	peak				



### Horizontal



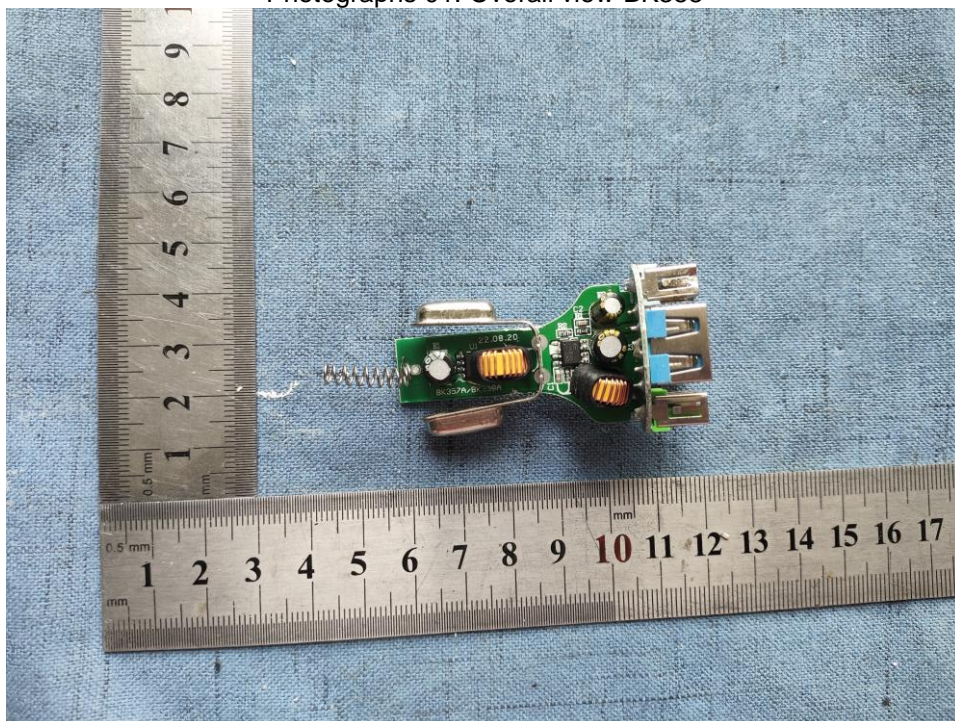
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	100.5806	47.01	-20.07	26.94	43.50	-16.56	peak				
2	218.3085	46.70	-18.47	28.23	46.00	-17.77	peak				



## 5. PHOTO OF THE EUT

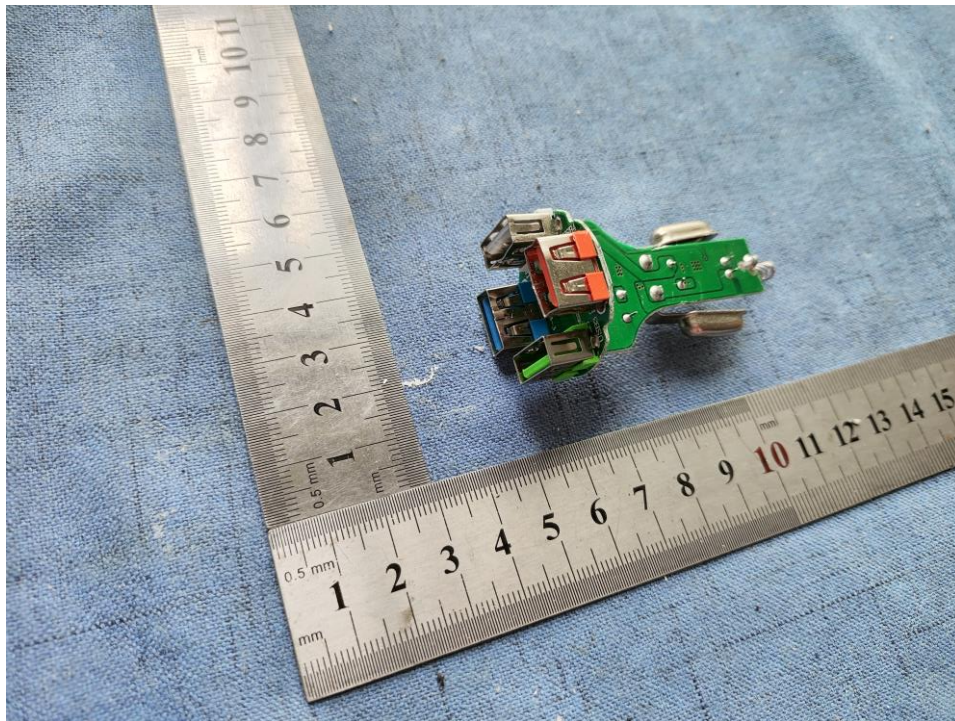


Photographs 01: Overall view-BK358

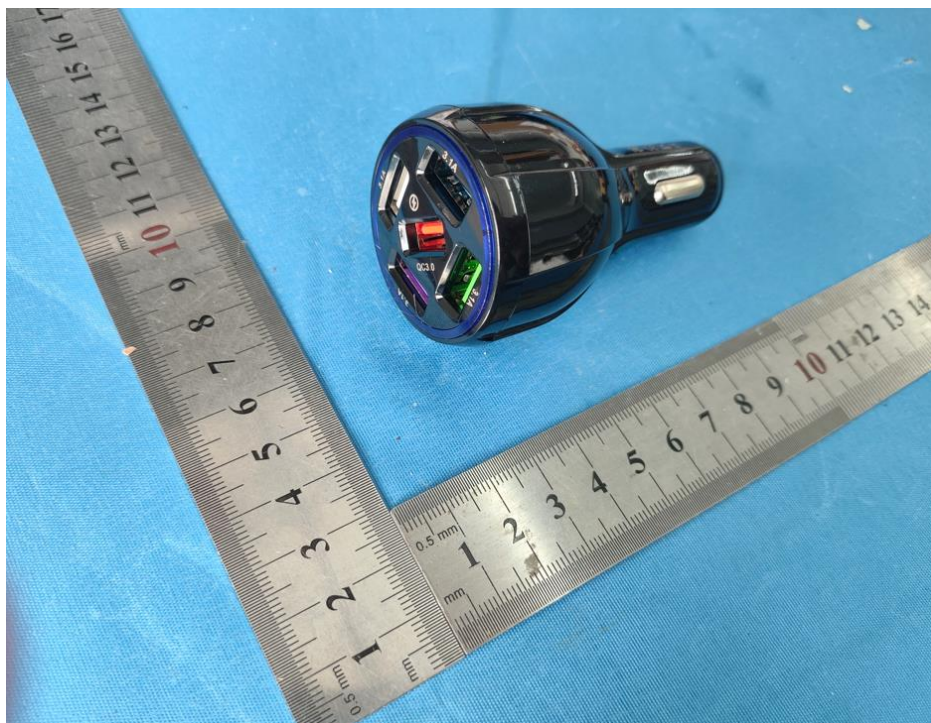


Photographs 02: PCB view--BK358



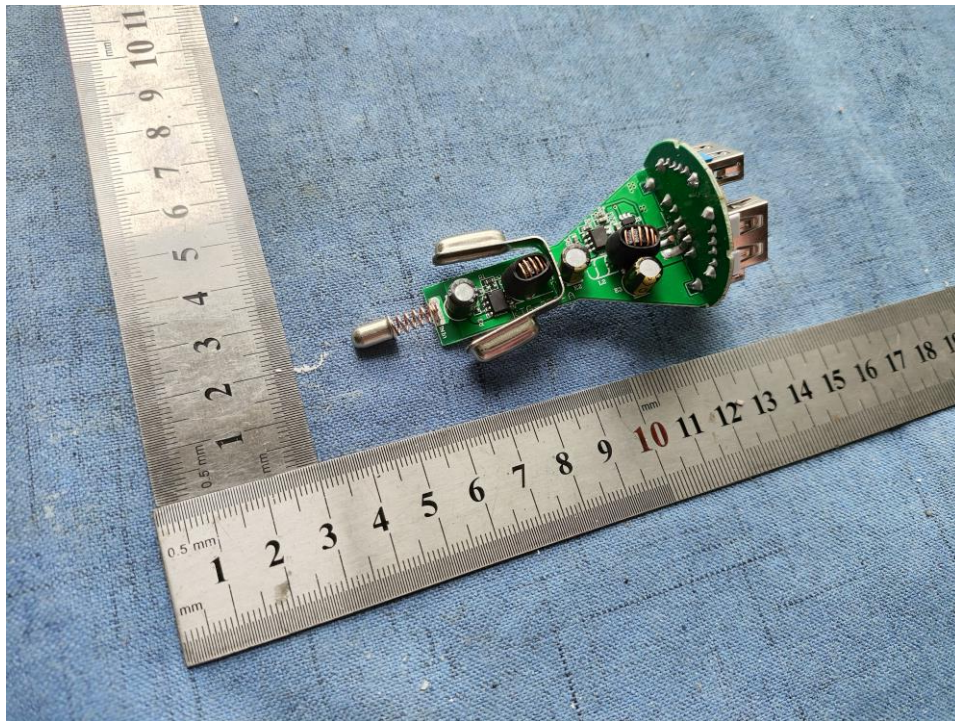


Photographs 03: PCB view --BK358

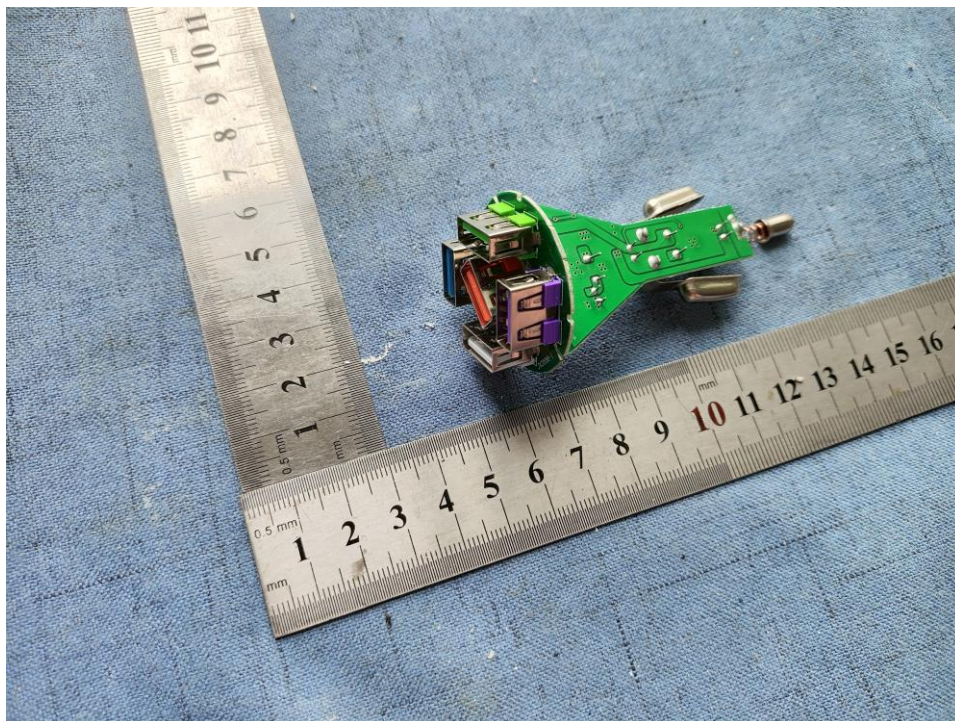


Photographs 04: Overall view-BK359



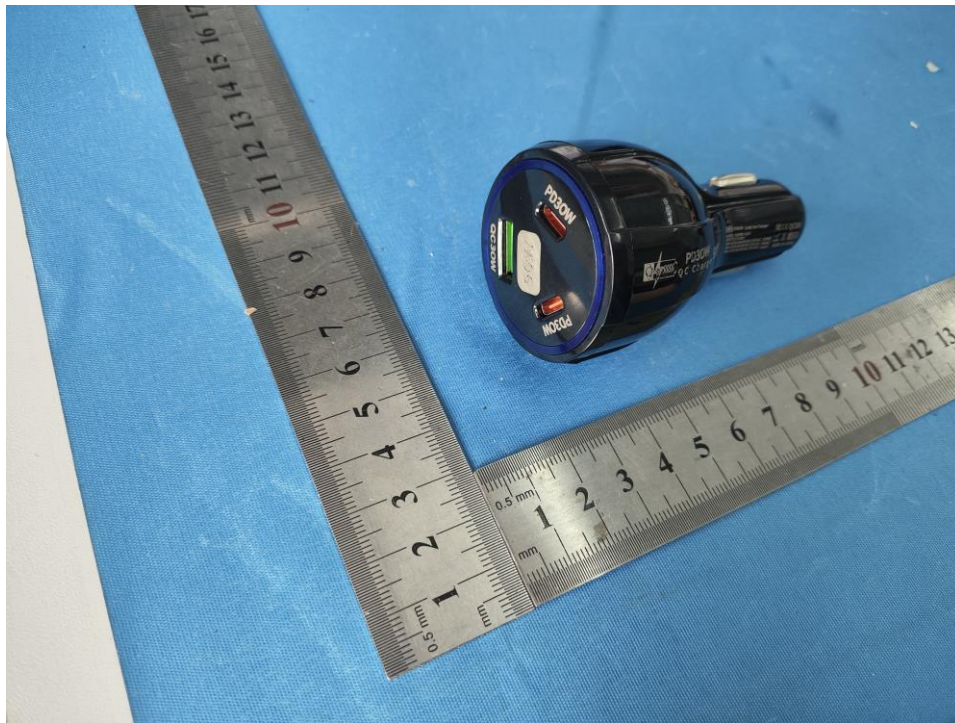


Photographs 05: PCB view --BK359

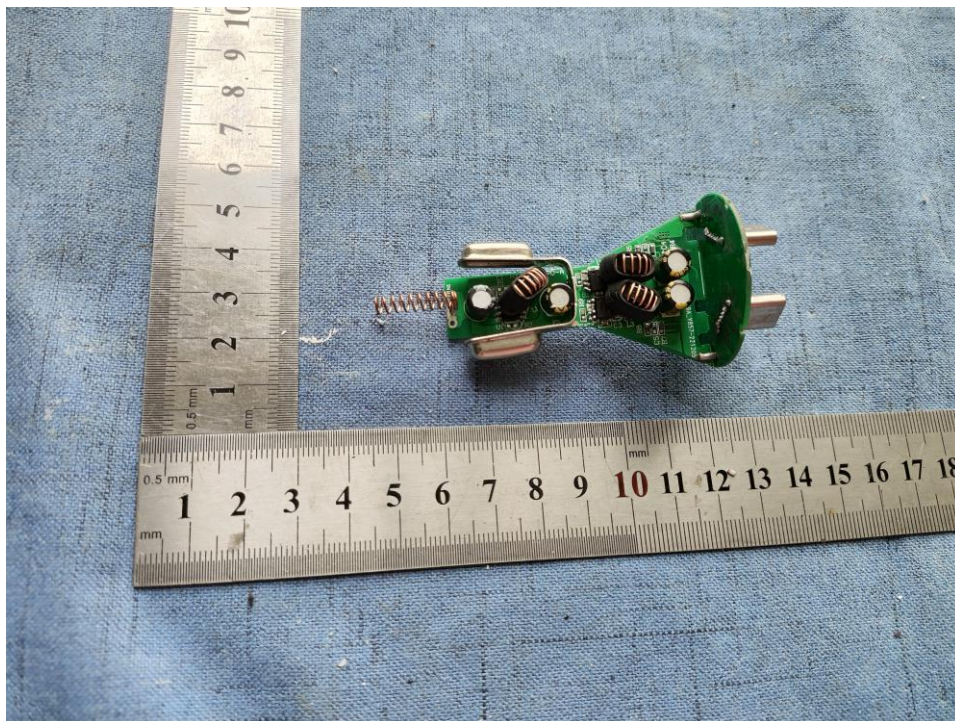


Photographs 06: PCB view --BK359



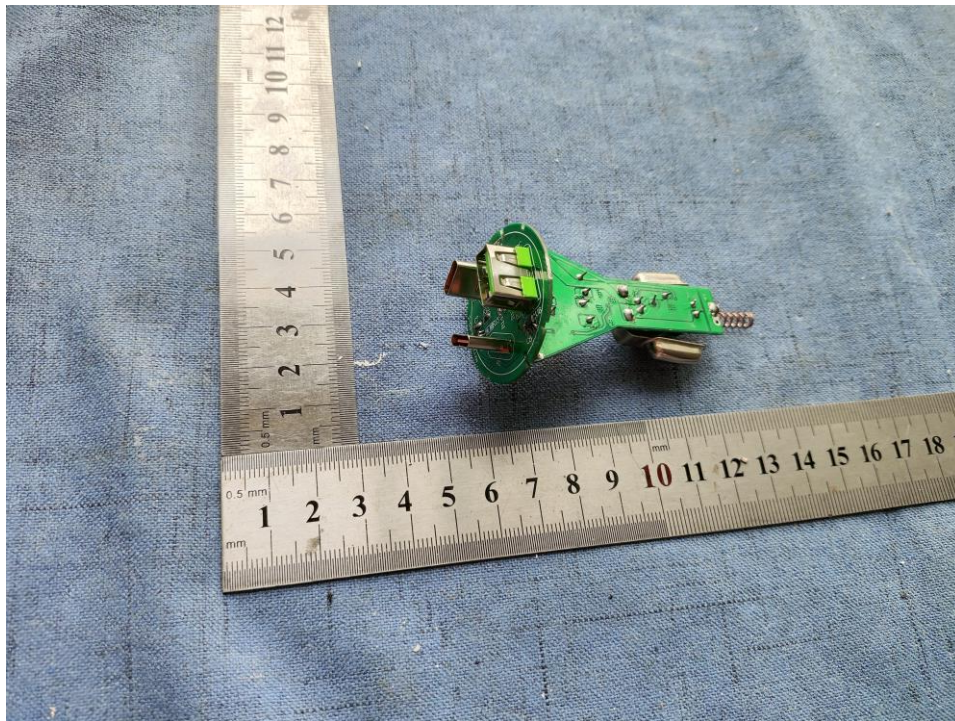


Photographs 07: Overall view- BK359-1A2C

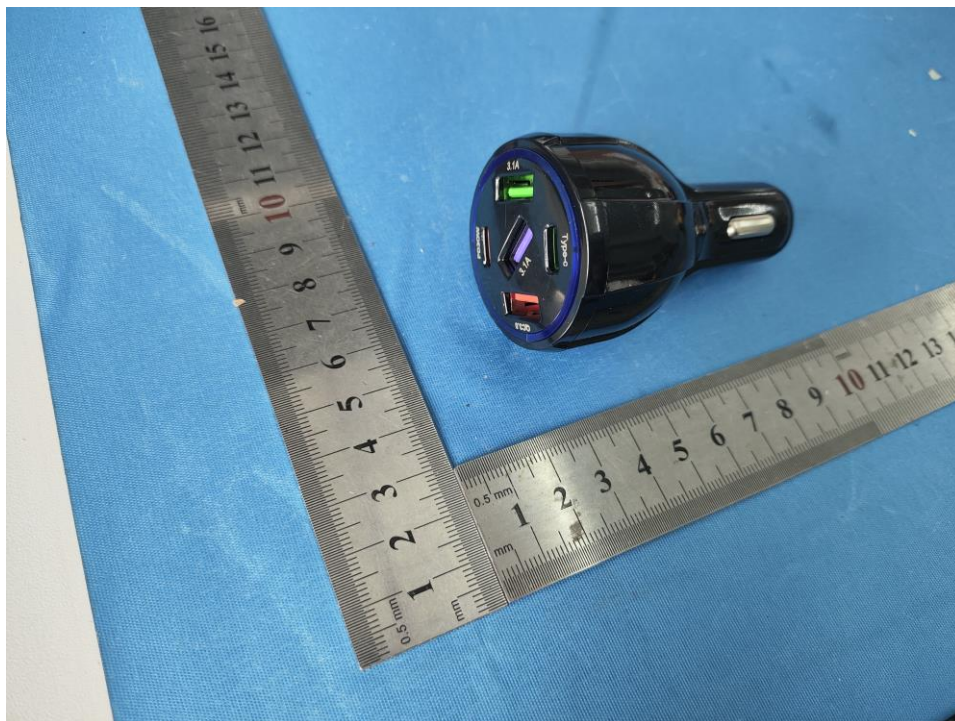


Photographs 08: PCB view -- BK359-1A2C



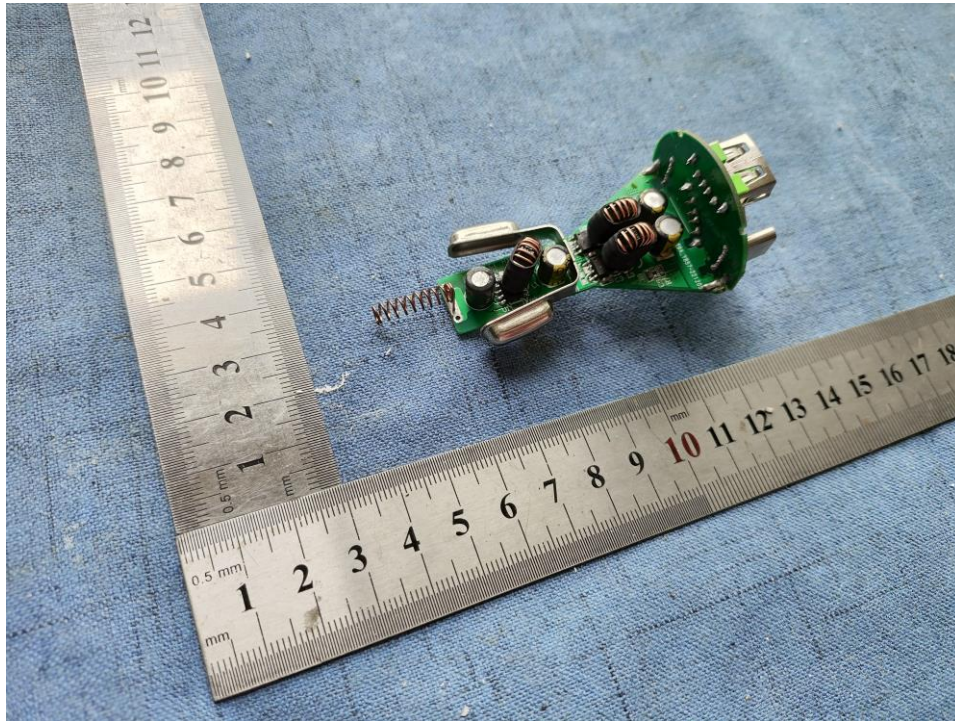


Photographs 09: PCB view -- BK359-1A2C

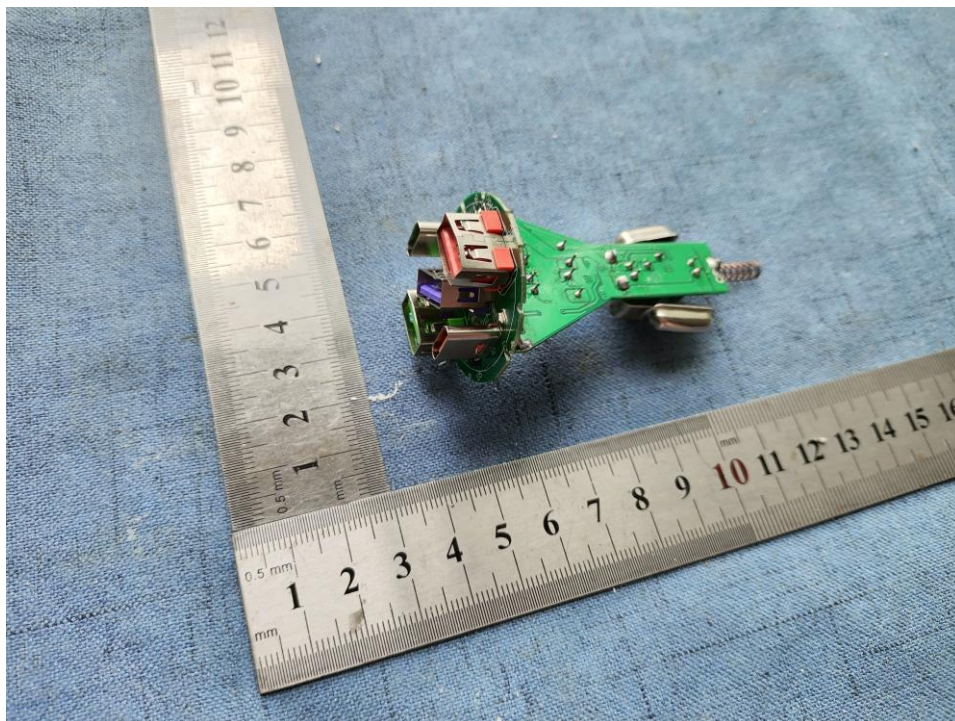


Photographs 10: Overall view- BK359-3A2C





Photographs 11: PCB view -- BK359-3A2C

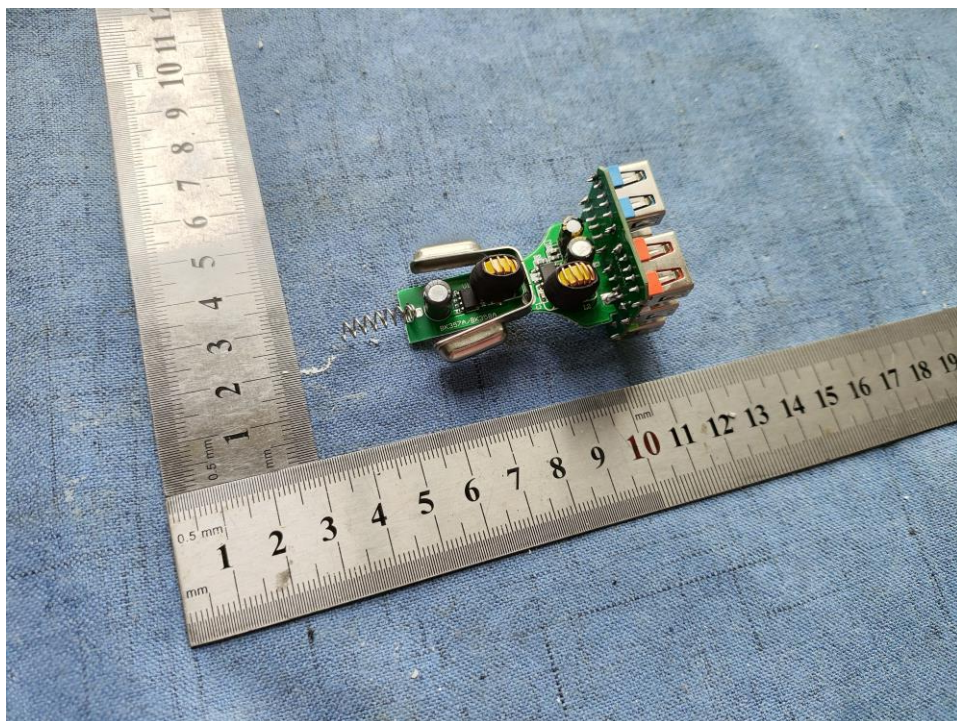


Photographs 12: PCB view -- BK359-3A2C

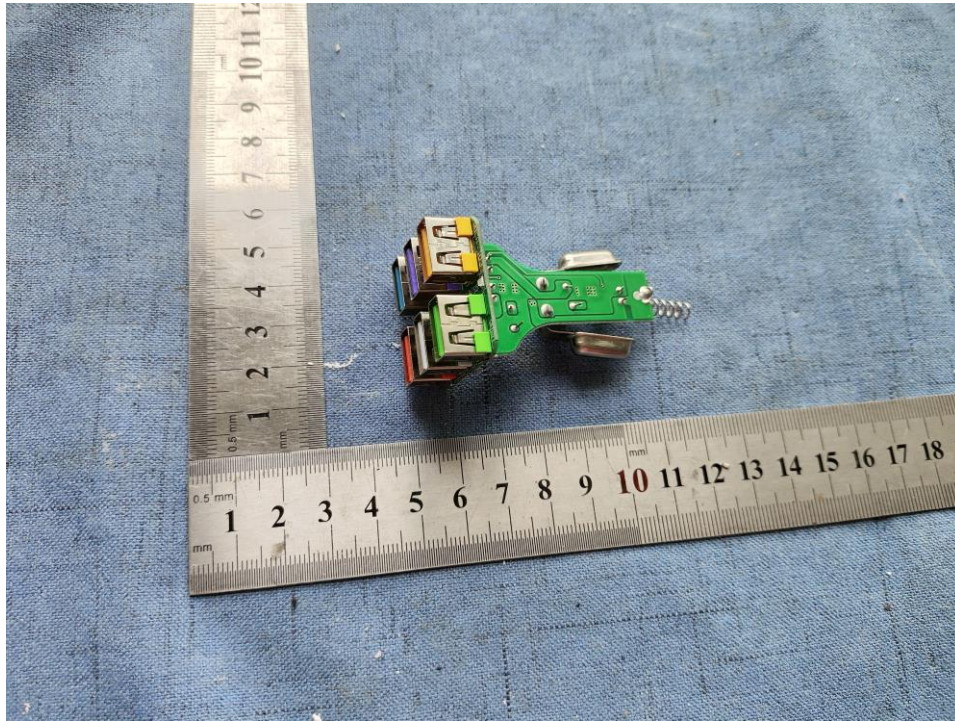




Photographs 13: Overall view- BK360



Photographs 14: PCB view -- BK360



Photographs 15: PCB view -- BK360

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