FCC SDoC TEST REPORT

Shenzhen YIDA Auto-ID Technology Co., Ltd

Handheld Barcode Scanner

Test Model: HS23-DPM

Prepared for	:	Shenzhen YIDA Auto-ID Technology Co., Ltd
Address	:	18th Floor, China Nonferrous Building, Tian'an Community, Shatou Street, Futian District, Shenzhen, China
Prepared by	:	Shenzhen LCS Compliance Testing Laboratory Ltd.
Address	:	Room 101, 201, Building A and Room 301, Building C, Juji Industrial Park, Yabianxueziwei, Shajing Street, Bao'an District, Shenzhen, Guangdong, China
Tel	:	(+86)755-82591330
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Web	:	www.LCS-cert.com
Mail	:	webmaster@LCS-cert.com
Date of receipt of test sample	:	August 27, 2024
Number of tested samples	:	1
Serial number	:	Prototype
Date of Test	:	August 27, 2024 ~ September 02, 2024
Date of Report	:	September 02, 2024

FCC SDoC TEST REPORT
FCC 47 CFR Part 15 Subpart B, Class B(SDoC), ANSI C63.4 -2014

Report Reference No.	:	**LCS201222081AE**
Date Of Issue	:	September 02, 2024
Testing Laboratory Name	:	**Shenzhen LCS Compliance Testing Laboratory Ltd**
Address	:	Room 101, 201, Building A and Room 301, Building C, Juji Industrial Park, Yabianxueziwei, Shajing Street, Bao'an 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 YIDA Auto-ID Technology Co., Ltd**
Address	:	18th Floor, China Nonferrous Building, Tian'an Community, Shatou Street, Futian District, Shenzhen, China
Test Specification		
Standard.....	:	FFC 47 CFR Part 15 Subpart B, Class B(SDoC), ANSI C63.4-2014
Test Report Form No.	:	LCSEMC-1.0
TRF Originator.....	:	Shenzhen LCS Compliance Testing Laboratory Ltd.
Master TRF	:	Dated 2011-03

Test Item Description.....	:	Handheld Barcode Scanner
Trade Mark.....	:	UIQO
Test Model	:	HS23-DPM
Ratings	:	Please Refer To Page 7
Result	:	Positive

Compiled by:	**Supervised by:**	**Approved by:**
Mia Huang	Jason Deng	
Mia Huang/ File administrators	Jason Deng/ Technique principal	Gavin Liang/ Manager

FCC -- TEST REPORT

Test Report No. : LCS201222081AE	September 02, 2024 Date of issue

Test Model.....	:	HS23-DPM
EUT.....	:	Handheld Barcode Scanner
Applicant.....	**:**	**Shenzhen YIDA Auto-ID Technology Co., Ltd**
Address.....	:	18th Floor, China Nonferrous Building, Tian'an Community, Shatou Street, Futian District, Shenzhen, China
Telephone.....	:	/
Fax.....	:	/
Manufacturer.....	**:**	**Shenzhen YIDA Auto-ID Technology Co., Ltd**
Address.....	:	18th Floor, China Nonferrous Building, Tian'an Community, Shatou Street, Futian District, Shenzhen, China
Telephone.....	:	/
Fax.....	:	/
Factory.....	:	**Shenzhen YIDA Auto-ID Technology Co., Ltd**
Address.....	:	18th Floor, China Nonferrous Building, Tian'an Community, Shatou Street, Futian District, Shenzhen, China
Telephone.....	:	/
Fax.....	:	/

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

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.

Revision History

Revision	Issue Date	Revisions	Revised By
000	September 02, 2024	Initial Issue	Gavin Liang

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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**
Conducted disturbance at mains terminals	FCC 47 CFR Part 15 Subpart B, Class B(SDoC), ANSI C63.4 -2014	Class B	N/A
Radiated disturbance	FCC 47 CFR Part 15 Subpart B, Class B(SDoC), ANSI C63.4 -2014	Class B	PASS
N/A is an abbreviation for Not Applicable.			

Test mode:		
Mode 1	Working	Record

2. GENERAL INFORMATION

2.1. Description of Device (EUT)

EUT : Handheld Barcode Scanner

Trade Mark : UIQO

Test Model : HS23-DPM

Power Supply : Input: 5.0V, 280mA, 1.400W

2.2. Description of Test Facility

Site Description

EMC Lab. : NVLAP Accreditation Code is 600167-0.
FCC Designation Number is CN5024.
CAB identifier is CN0071.
CNAS Registration Number is L4595.

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 LCS 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	Parameters	Expanded Uncertainty (U_{lab})	Expanded Uncertainty (U_{cispr})
Conducted Emission	Level accuracy (9kHz to 150kHz) (150kHz to 30MHz)	± 2.63 dB ± 2.35 dB	± 3.8 dB ± 3.4 dB
Power Disturbance	Level accuracy (30MHz to 300MHz)	± 2.90dB	± 4.5 dB
Electromagnetic Radiated Emission (3-loop)	Level accuracy (9kHz to 30MHz)	± 3.60 dB	± 3.3 dB
Radiated Emission	Level accuracy (9kHz to 30MHz)	± 3.68 dB	N/A
Radiated Emission	Level accuracy (30MHz to 1000MHz)	± 3.48 dB	± 5.3 dB
Radiated Emission	Level accuracy (above 1000MHz)	± 3.90 dB	± 5.2 dB
Mains Harmonic	Voltage	± 0.510%	N/A
Voltage Fluctuations & Flicker	Voltage	± 0.510%	N/A
EMF		± 21.59%	N/A

(1) Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus.

(2) The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor of k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

3. TEST RESULTS

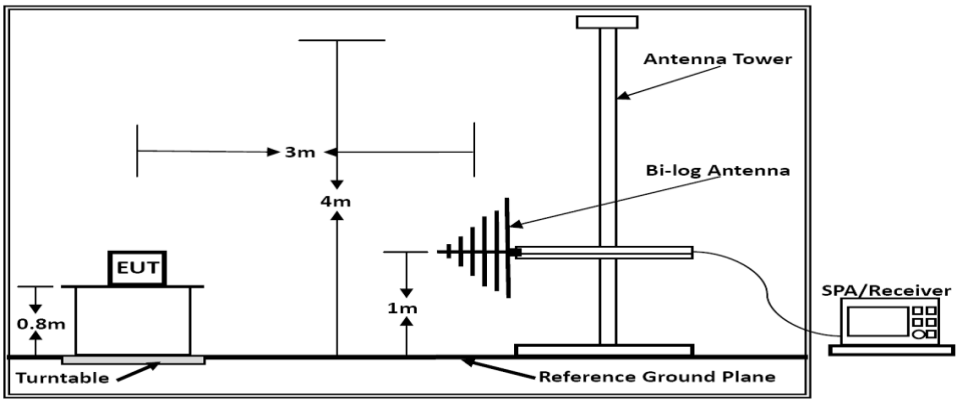
3.1.Radiated Emission Measurement

3.1.1. Test Equipment

The following test equipments are used during the radiated emission measurement:

Item	Equipment	Manufacturer	Model No.	Serial No.	Cal Date	Due Date
1	EMI Test Software	E3	E3-EMC	/	N/A	N/A
2	By-log Antenna	SCHWARZBECK	VULB9163	9163-470	2022-07-26	2025-07-25
3	Horn Antenna	SCHWARZBECK	BBHA 9120D	9120D-1925	2022-07-02	2025-07-01
4	EMI Test Receiver	R&S	ESR 7	101181	2024-06-22	2025-06-21
5	Broadband Preamplifier	/	BP-01M18G	P150501	2024-06-22	2025-06-21

3.1.2. Block Diagram of Test Setup



Below 1GHz

3.1.3. Radiated Emission Limit (Class B)

Limits for Radiated Disturbance Below 1GHz

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		μV/m	dB(μV)/m
30 ~ 88	3	100	40
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46
960 ~ 1000	3	500	54

Remark: (1) Emission level (dB)μV = 20 log Emission level μV/m
(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.

3.1.4. EUT Configuration on Measurement

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

3.1.5. Operating Condition of EUT

3.5.1.Setup the EUT as shown in Section 3.2.
3.5.2.Let the EUT work in test Mode 1 and measure it.

3.1.6. Test Procedure

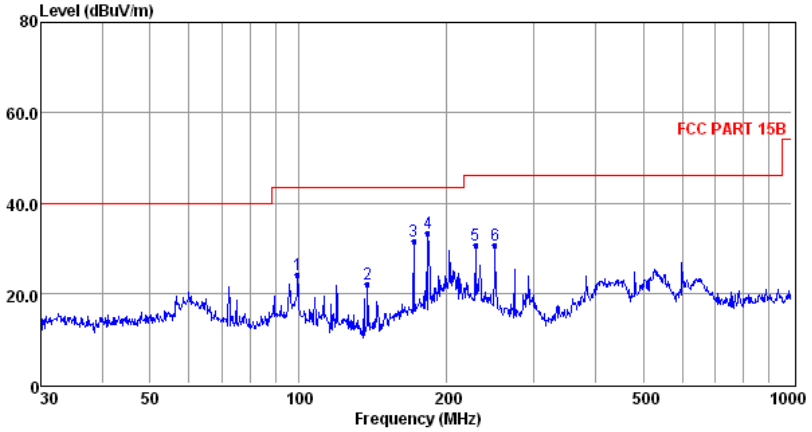
EUT and its simulators are placed on a turntable, which is 0.8 meter high above ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on a antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated by-log antenna) is used as receiving antenna. Both horizontal and vertical polarization of the antenna is set on measurement. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.4-2009 on radiated emission measurement.

The bandwidth of the EMI test receiver is set at 120kHz, 300kHz.
The frequency range from 30MHz to 1000MHz is checked.
The frequency range from 1GHz to the frequency which about 5th carrier harmonic or 6GHz is checked.

3.1.7. Test Results

PASS.
The test result please refer to the next page.

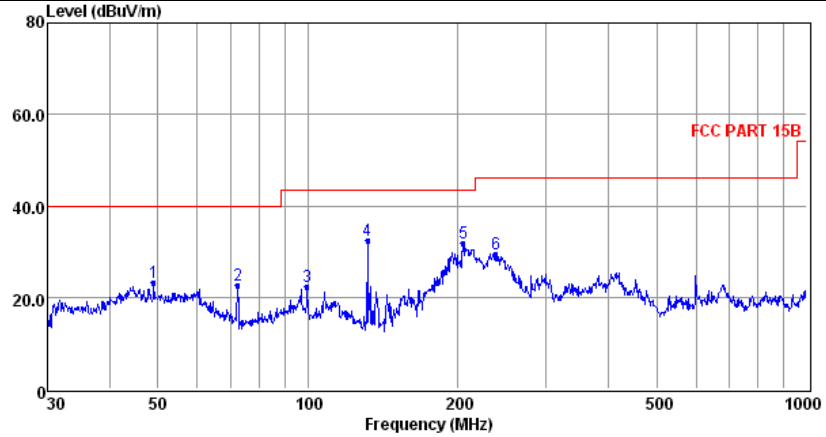
Test Model	HS23-DPM	Test Mode	Mode 1
Environmental Conditions	22.2℃, 53.1% RH	Detector Function	Quasi-peak
Pol	Vertical	Distance	3m
Test Engineer	Daiwei Dai	Test Voltage	DC 5V



	Freq	Reading	CabLos	Antfac	Measured	Limit	Over	Remark
	MHz	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB	
1	99.53	40.39	0.61	13.13	24.03	43.50	-19.47	QP
2	137.90	43.12	0.70	8.35	21.95	43.50	-21.55	QP
3	171.39	51.89	0.91	9.07	31.57	43.50	-11.93	QP
4	183.20	52.94	0.70	9.96	33.28	43.50	-10.22	QP
5	228.49	48.44	0.93	11.58	30.55	46.00	-15.45	QP
6	250.30	47.83	1.02	12.07	30.49	46.00	-15.51	QP

Note: 1. All readings are Quasi-peak values.
2. Measured= Reading + Antenna Factor + Cable Loss
3. The emission that are 20db below the official limit are not reported

Test Model	HS23-DPM	Test Mode	Mode 1
Environmental Conditions	22.2℃, 53.1% RH	Detector Function	Quasi-peak
Pol	Horizontal	Distance	3m
Test Engineer	Daiwei Dai	Test Voltage	DC 5V



	Freq	Reading	CabLos	Antfac	Measured	Limit	Over	Remark
	MHz	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB	
1	49.01	39.45	0.35	13.31	23.11	40.00	-16.89	QP
2	72.34	44.02	0.55	8.25	22.74	40.00	-17.26	QP
3	99.53	38.69	0.61	13.13	22.33	43.50	-21.17	QP
4	131.76	52.94	0.76	8.80	32.30	43.50	-11.20	QP
5	204.96	50.42	0.99	10.73	31.78	43.50	-11.72	QP
6	238.31	47.01	0.96	12.01	29.56	46.00	-16.44	QP

Note: 1. All readings are Quasi-peak values.
2. Measured= Reading + Antenna Factor + Cable Loss
3. The emission that are 20db below the official limit are not reported

Note: Pre-Scan all mode, Thus record worse case mode result in this report.

4. PHOTOGRAPHS OF TEST SETUP

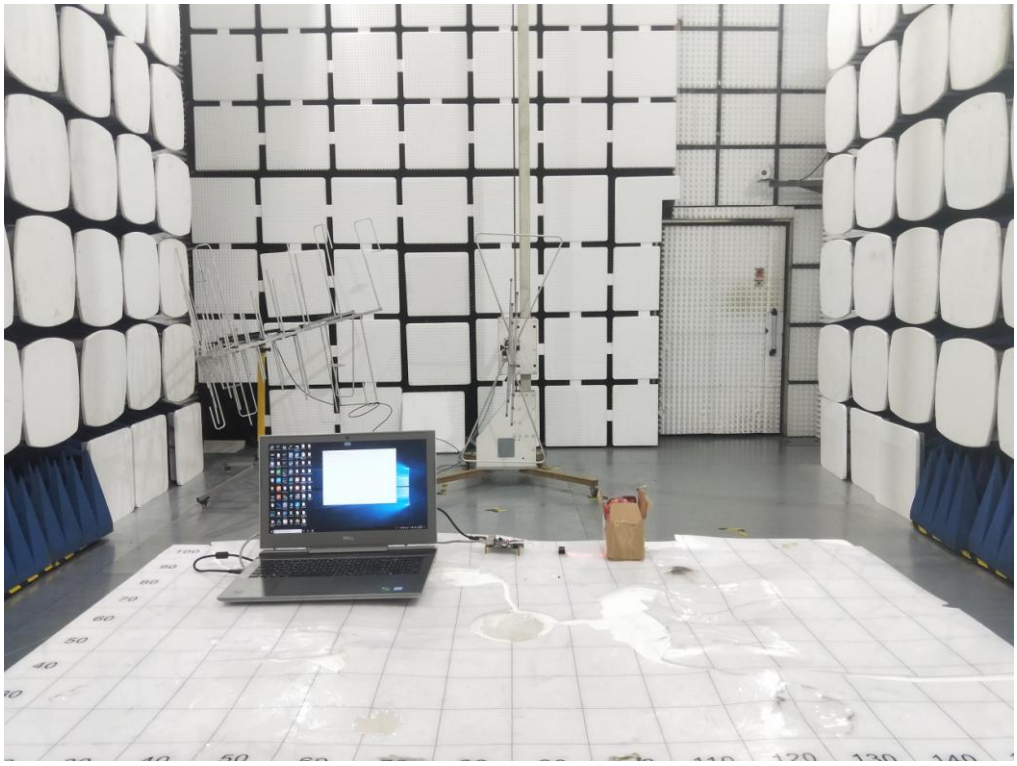


Photo of Radiated Measurement

5. EXTERNAL AND INTERNAL PHOTOS OF THE EUT

Fig. 1

Fig. 2

5. EXTERNAL AND INTERNAL PHOTOS OF THE EUT

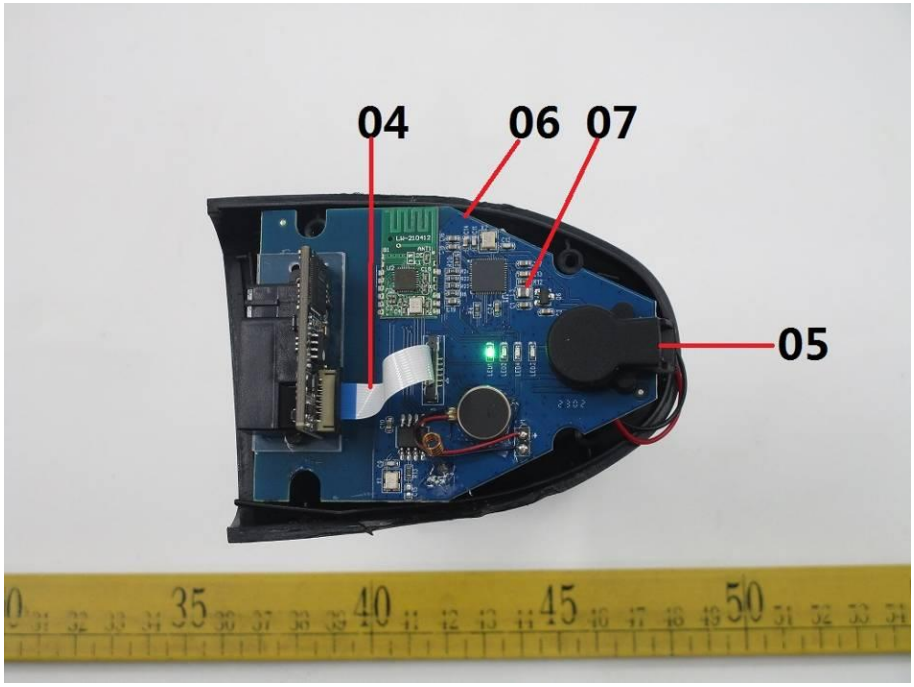


Fig. 3

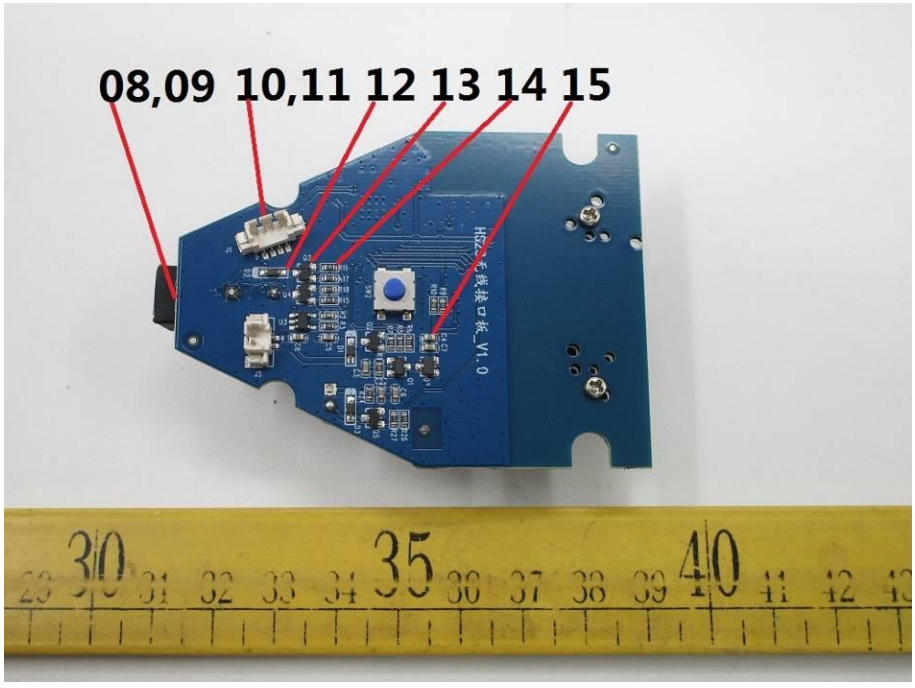


Fig. 4

5. EXTERNAL AND INTERNAL PHOTOS OF THE EUT

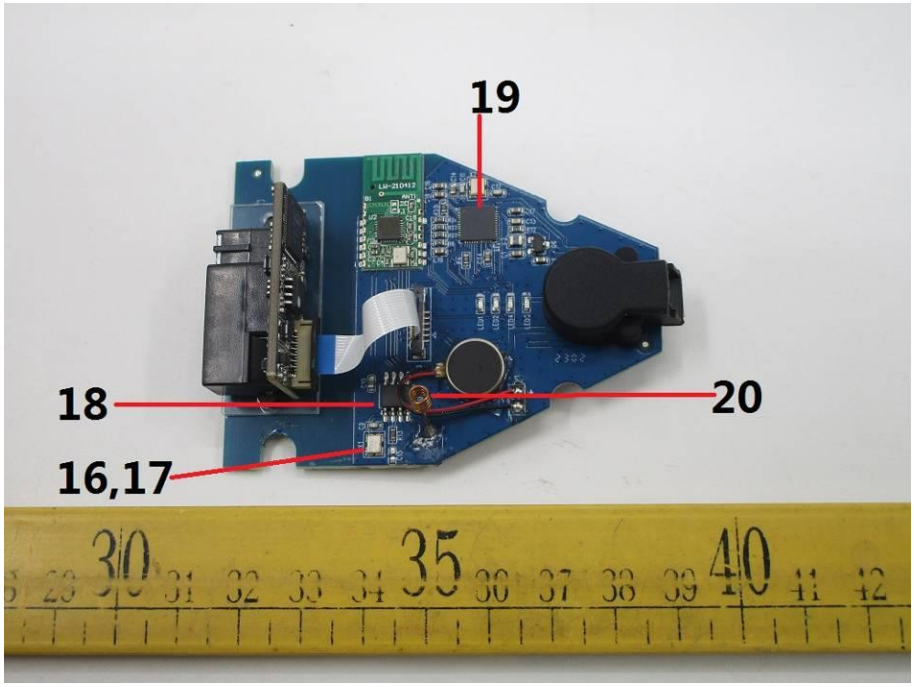


Fig. 5

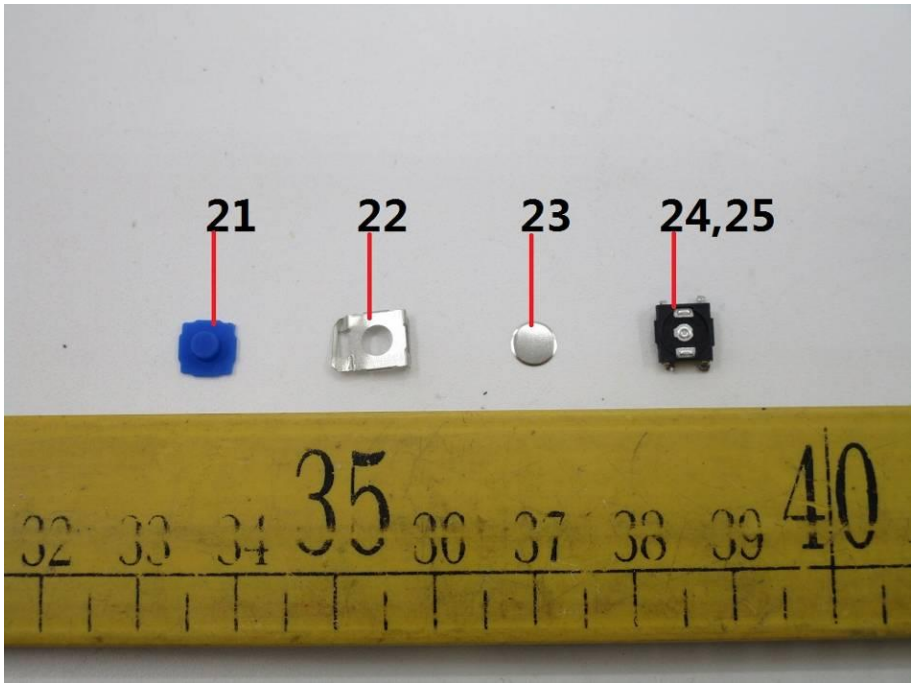


Fig. 6

5. EXTERNAL AND INTERNAL PHOTOS OF THE EUT

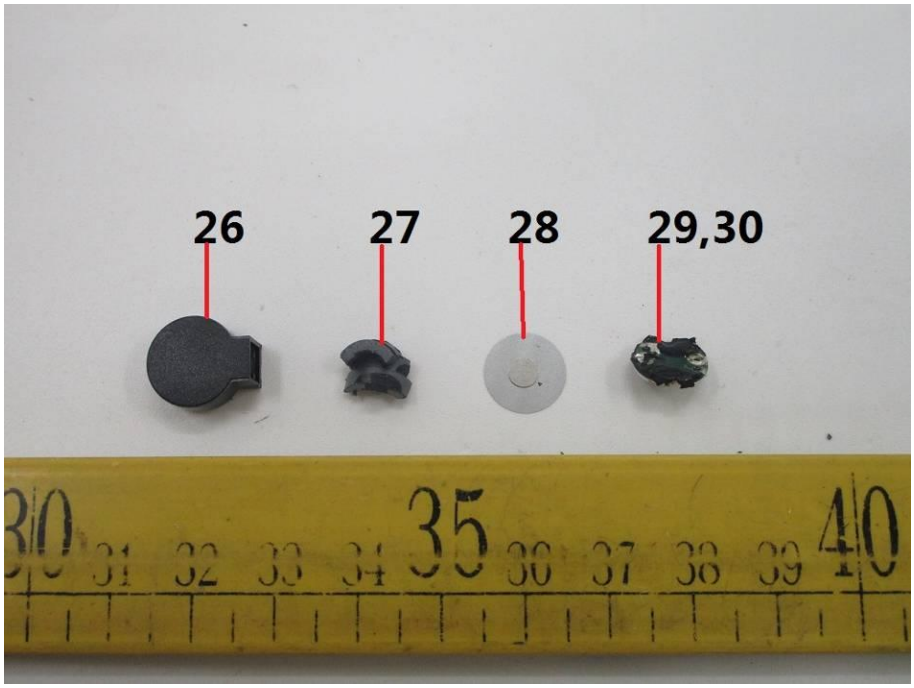


Fig. 7

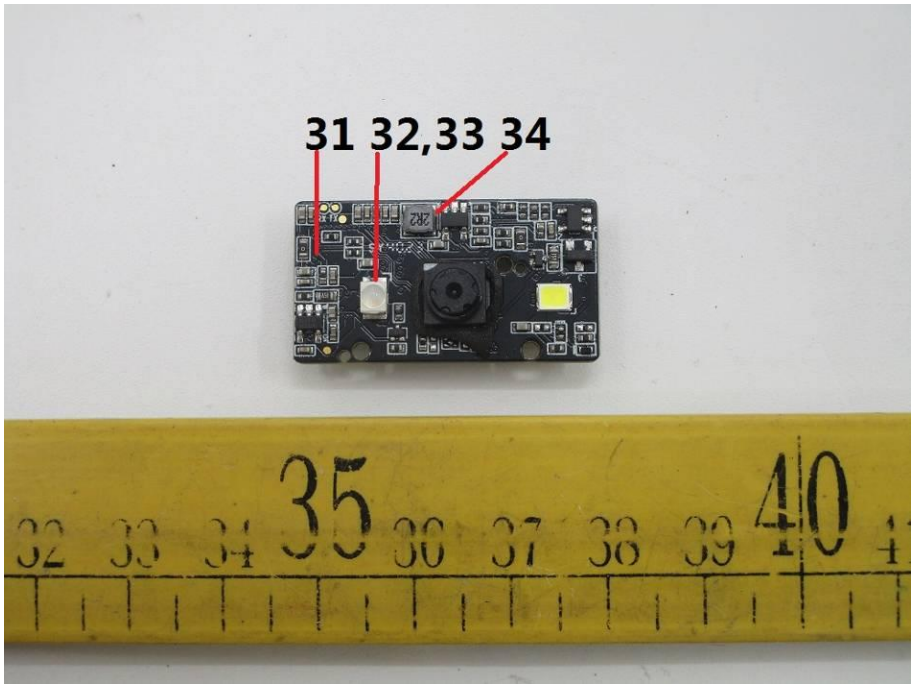


Fig. 8

5. EXTERNAL AND INTERNAL PHOTOS OF THE EUT

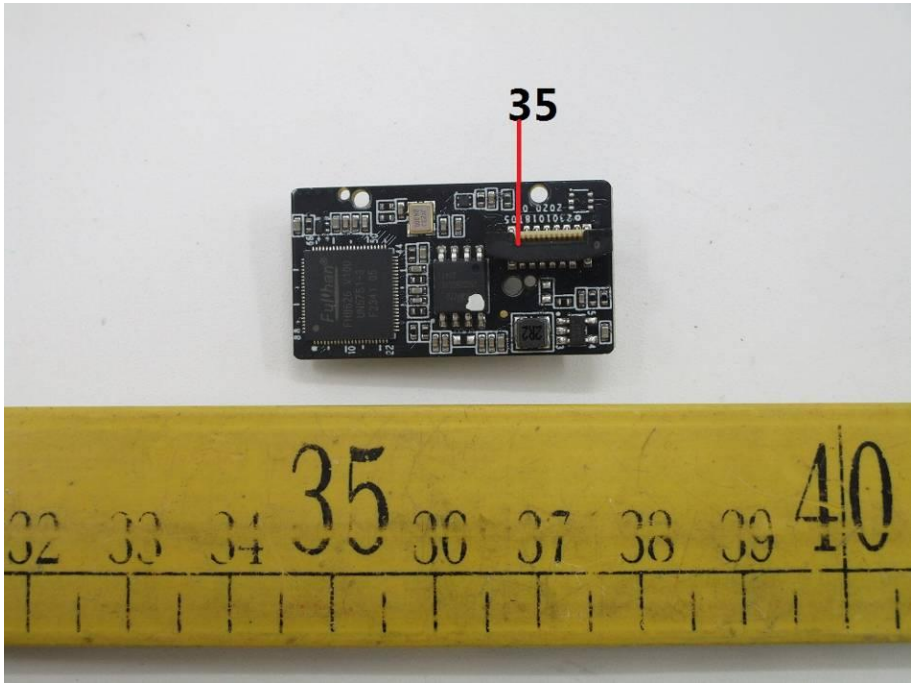


Fig. 9

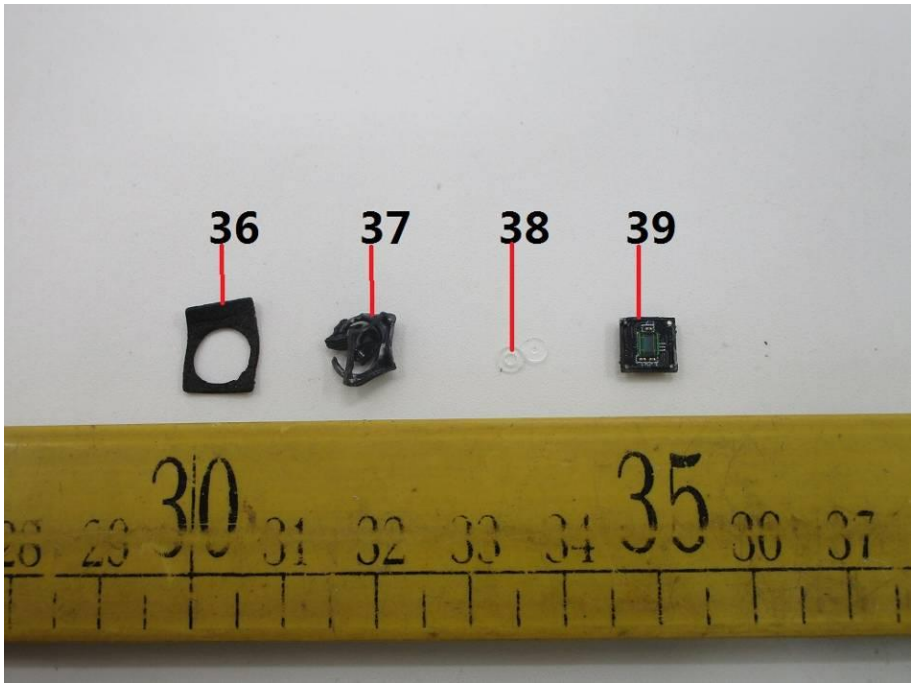


Fig. 10

5. EXTERNAL AND INTERNAL PHOTOS OF THE EUT

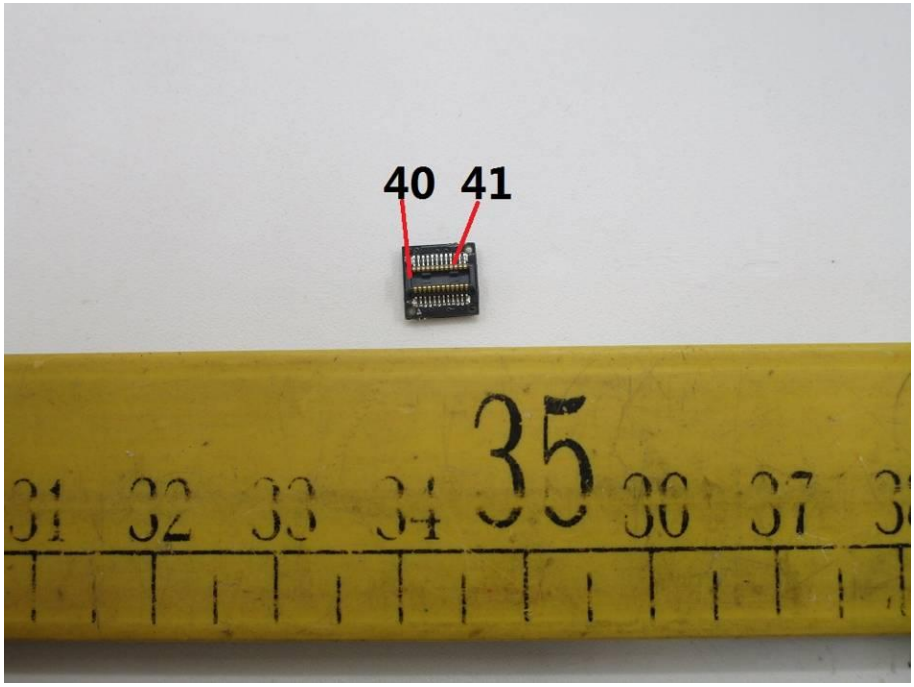


Fig. 11

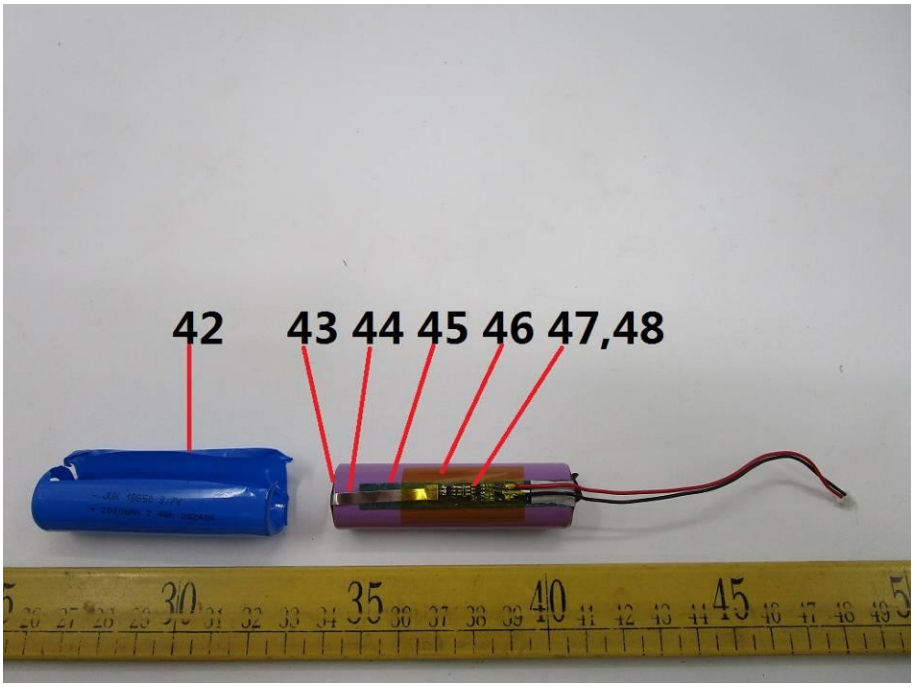


Fig. 12

5. EXTERNAL AND INTERNAL PHOTOS OF THE EUT

Fig. 13

Fig. 14

5. EXTERNAL AND INTERNAL PHOTOS OF THE EUT

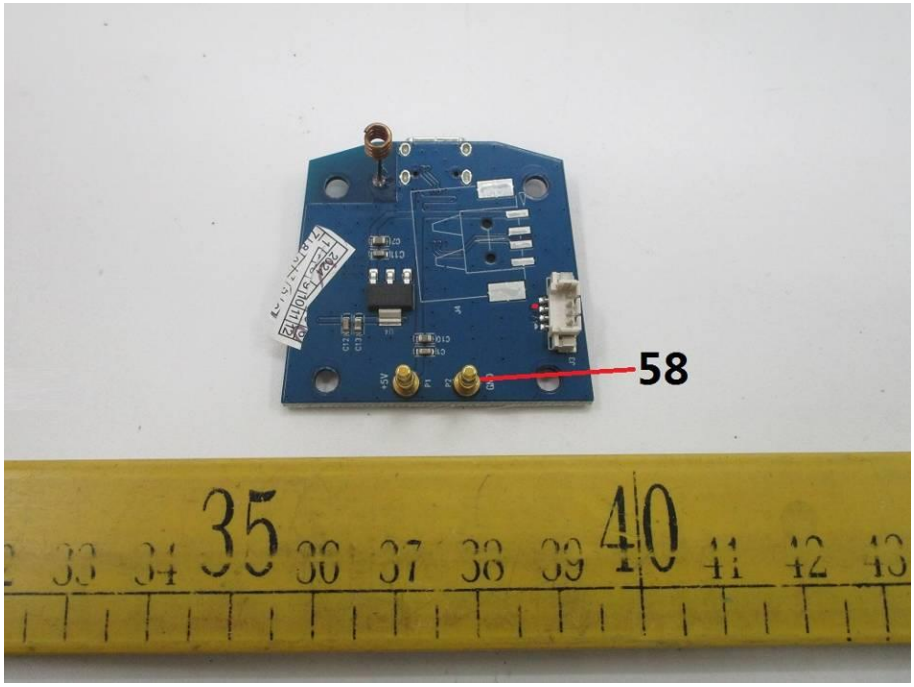


Fig. 15

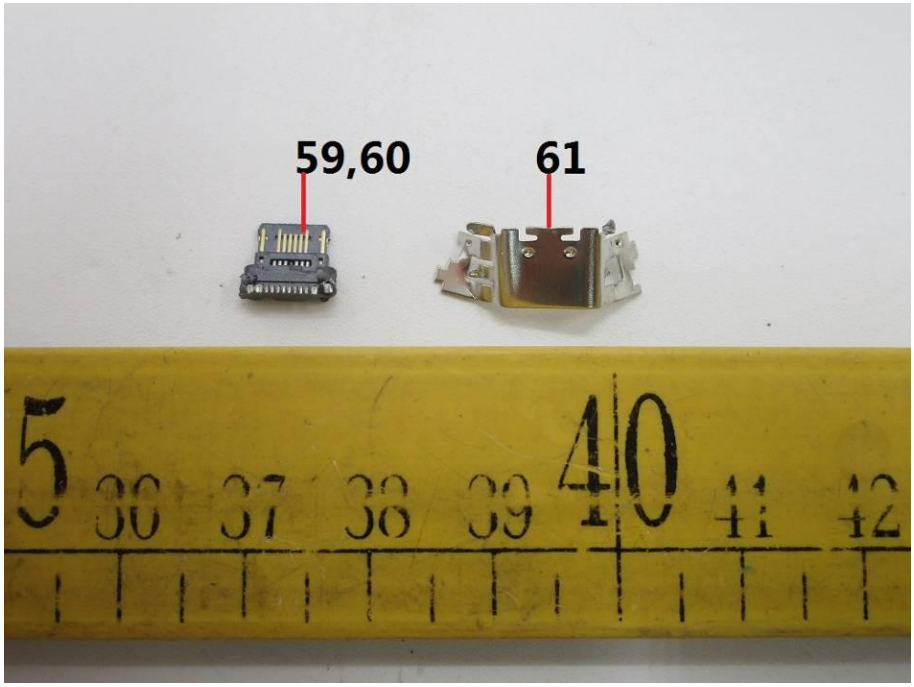


Fig. 16

5. EXTERNAL AND INTERNAL PHOTOS OF THE EUT

Fig. 17

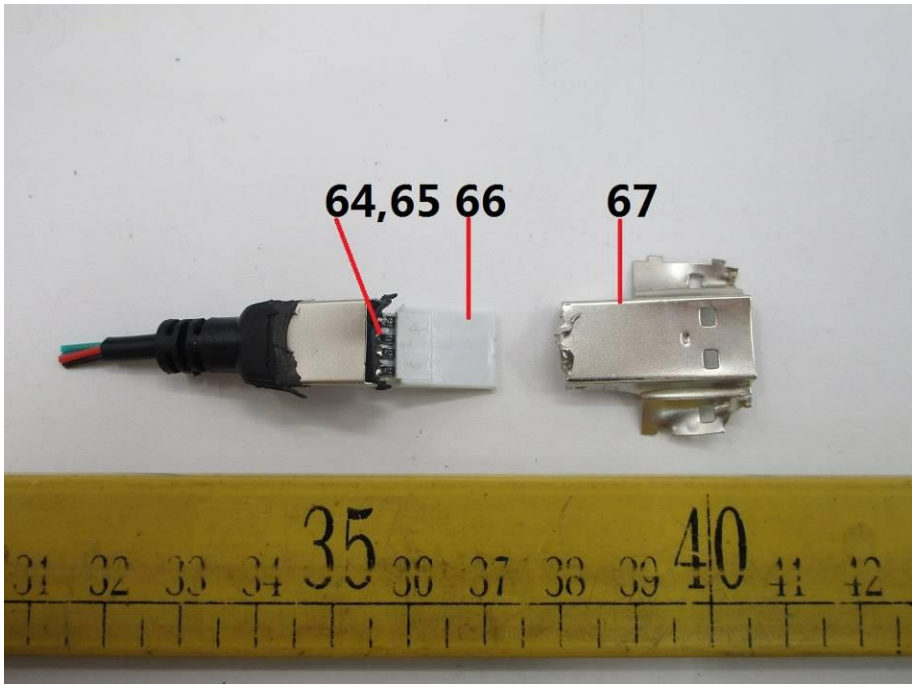


Fig. 18

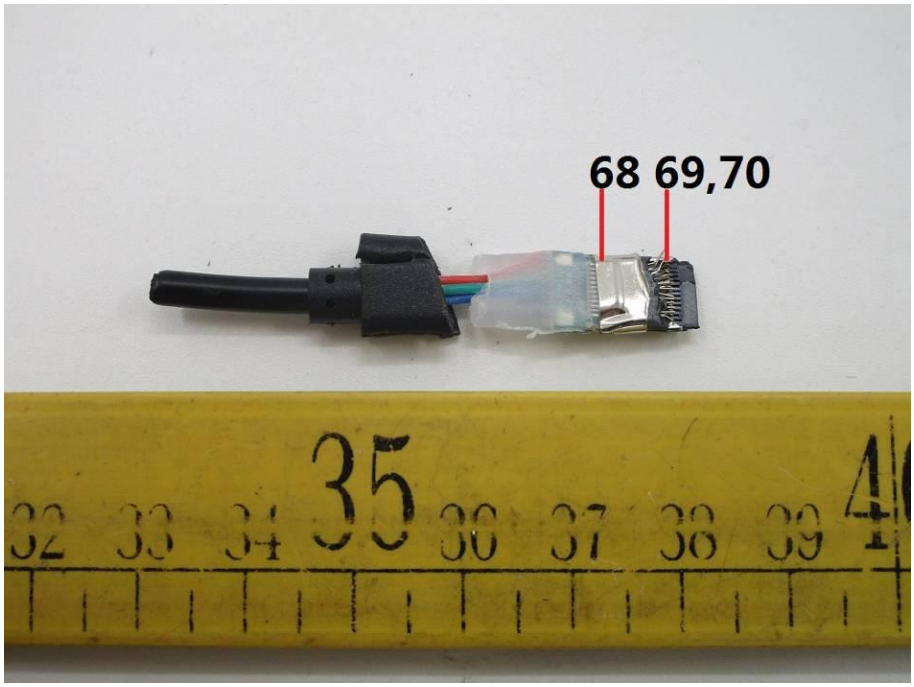


Fig. 19

----------THE END OF TEST REPORT----------