TCT 通测检测
TESTING CENTRE TECHNOLOGY

TEST REPORT

Product: Document Camera

Model No.: IRIScan Desk 5 Pro

Trade mark: N/A

Report No.: TCT190408E902

Issued Date: Apr. 12, 2019

Issued for:

IRIS S.A

10 Rue du Bosquet, 1348 Louvain-La-Neuve, Belgique

Issued By:

Shenzhen Tongce Testing Lab
1B/F., Building 1, Yibaolai Industrial Park, Qiaotou, Fuyong, Baoan District, Shenzhen, Guangdong, China
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This test report was based on TCT190220E013, Change Applicant, Applicant Address, Manufacturer, Manufacturer Address, Photographs and Model No..

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Hotline: 400-6611-140 Tel: 86-755- 27673339 Fax: 86-755-27673332 http://www.tct-lab.com

1. Test Certification

Product:	Document Camera
Model No.:	IRIScan Desk 5 Pro
Applicant:	IRIS S.A
Address:	10 Rue du Bosquet, 1348 Louvain-La-Neuve, Belgique
Manufacturer:	Beijing Mysher Technology Co., Ltd.
Address:	Unit B306, Building #1, Info. Center, ZhongGuanCun Software Z-Park, HaiDian District, Beijing, China (100193)
Test Voltage:	DC 5 V (Notebook Computer Input AC 120 V/ 60 Hz)
Date of Test:	Feb. 20, 2019 ~ Mar. 01, 2019
Applicable Standards:	47 CFR FCC Part 15 Subpart B ANSI C63.4: 2014

The above equipment has been tested by Shenzhen Tongce Testing Lab and found compliance with the requirements set forth in the technical standards mentioned above. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Tested By:	Zak	***Date:***	***Mar. 01, 2019***
Check By:	Howie	***Date:***	***Apr. 12, 2019***
Approved By:	Tomsin	***Date:***	***Apr. 12, 2019***

SHENZHEN TONGCE TESTING LAB TCT

2. Test Result Summary

Emission		
Test Method	**Item**	**Result**
FCC 47 CFR Part 15 Subpart B	Conducted Emission at Mains Terminals	Pass
	Radiated Emission	Pass

Note:

1. Pass: Test item meets the requirement.
2. Fail: Test item does not meet the requirement.
3. N/A: Test case does not apply to the test object.
4. The test result judgment is decided by the limit of test standard.
5. The information of measurement uncertainty is available upon the customer's request.

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3. EUT Description

Product Name:	Document Camera
Model No.:	IRIScan Desk 5 Pro
Product Parameter:	Input: DC 5 V/ 1 A
AC Mains:	☐Shielded ☐Unshielded, ☐Detachable ☐Un-detachable ☒Not applicable ☐Length:
USB Line:	☐Shielded ☒Unshielded, ☐Detachable ☒Un-detachable ☐Not applicable ☒Length: 2m
Control Line:	☐Shielded ☒Unshielded, ☐Detachable ☒Un-detachable ☐Not applicable ☒Length: 1m

4. Test Methodology

4.1. Decision of Final Test Mode

The EUT was tested together with the thereinafter additional components, and a configuration, which produced the worst emission levels, was selected and recorded in this report.
The following test mode(s) were assessed:

Test Mode
Mode 1: Working

4.2. EUT System Operation

1. Set up EUT with the support equipments.
2. Make sure the EUT work normally during the test.

5. Setup of Equipment under Test

5.1. Description of Support Units

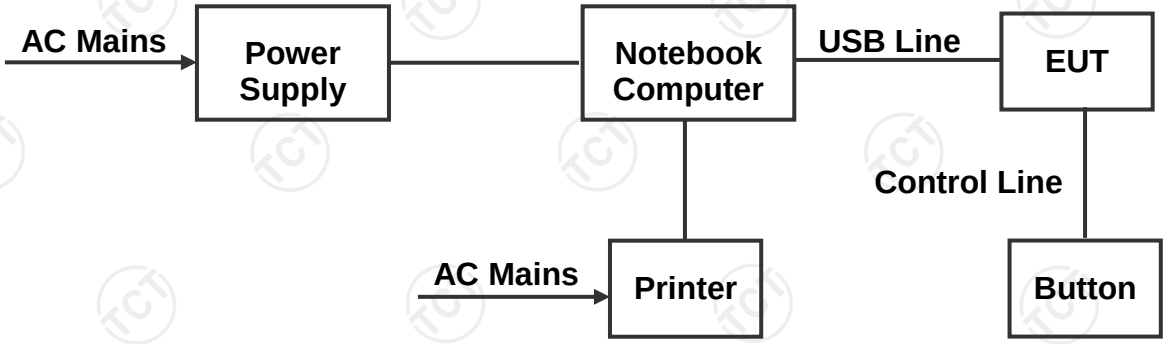
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Equipment	Model No.	Serial No.	FCC ID	Trade Name
Notebook Computer	XiaoXin CHAO5000	PF0WZYD9	/	Lenovo
Printer	L11121E	MQCA712843	/	CANON

Note:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

5.2. Configuration of System Under Test



(EUT: Document Camera)

6. Facilities and Accreditations

6.1. Facilities

The test facility is recognized, certified, or accredited by the following organizations:
FCC - Registration No.: 645098
Shenzhen Tongce Testing Lab
The 3m Semi-anechoic chamber has been registered and fully described in a report with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files.
The sites are constructed in conformance with the requirements of ANSI C63.4 and CISPR Publication 32. All receiving equipment conforms to CISPR Publication 16-1, “Radio Interference Measuring Apparatus and Measurement Methods.”

6.2. Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

No.	Item	MU
1.	Temperature	±0.1℃
2.	Humidity	±1.0 %
3.	Spurious Emissions, Conducted	±2.56 dB
4.	All Emissions, Radiated	±4.28 dB

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

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7. Emission Test

7.1. Conducted Emission at Mains Terminals

7.1.1. Test Specification

Test Requirement:	FCC 47 CFR Part 15 Subpart B
Test Method:	ANSI C63.4: 2014
Frequency Range:	150 kHz to 30 MHz

7.1.2. Limits

Frequency (MHz)	Class A dB(uV)		Class B dB(uV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 - 0.5	79	66	66 – 56[a]	56 – 46[a]
0.50 - 5.0	73	60	56	46
5.0 - 30.0	73	60	60	50
a. Decreases with the logarithm of the frequency				

7.1.3. Test Instruments

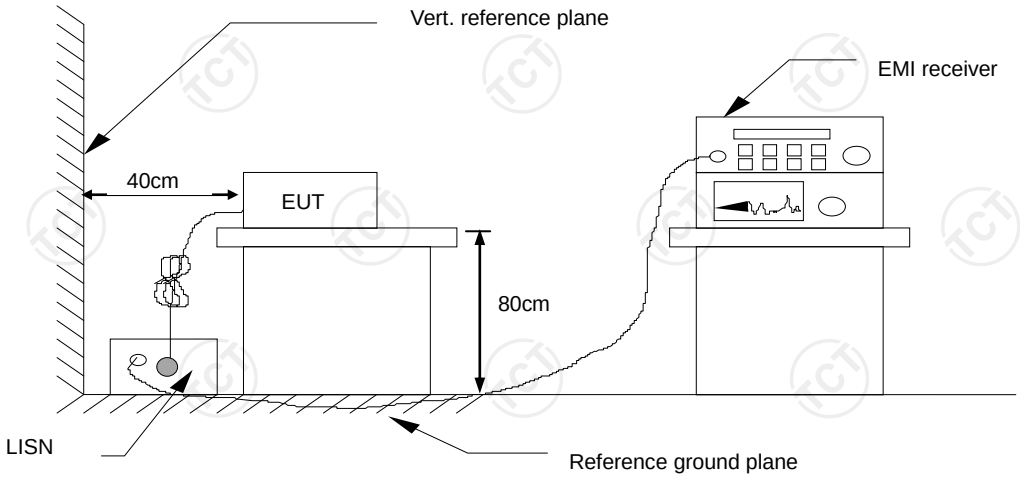
Conducted Emission Shielding Room Test Site (843)				
Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Due**
EMI Test Receiver	R&S	ESPI	101402	Jul. 17, 2019
LISN	Schwarzbeck	NSLK 8126	8126453	Sep. 20, 2019
Coax cable (9KHz-30MHz)	TCT	CE-05	N/A	Sep. 16, 2019
Test Software	Shurple Technology	EZ-EMC	EMEC-3A1	N/A

Note: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).

7.1.4. Test Method

The AMN was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane. This distance was between the closest points of the AMN and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the AMN. All power was connected to the system through Artificial Mains Network (AMN). Conducted voltage measurements on mains lines were made at the output of the AMN

7.1.5. Block Diagram of Test Setup



For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

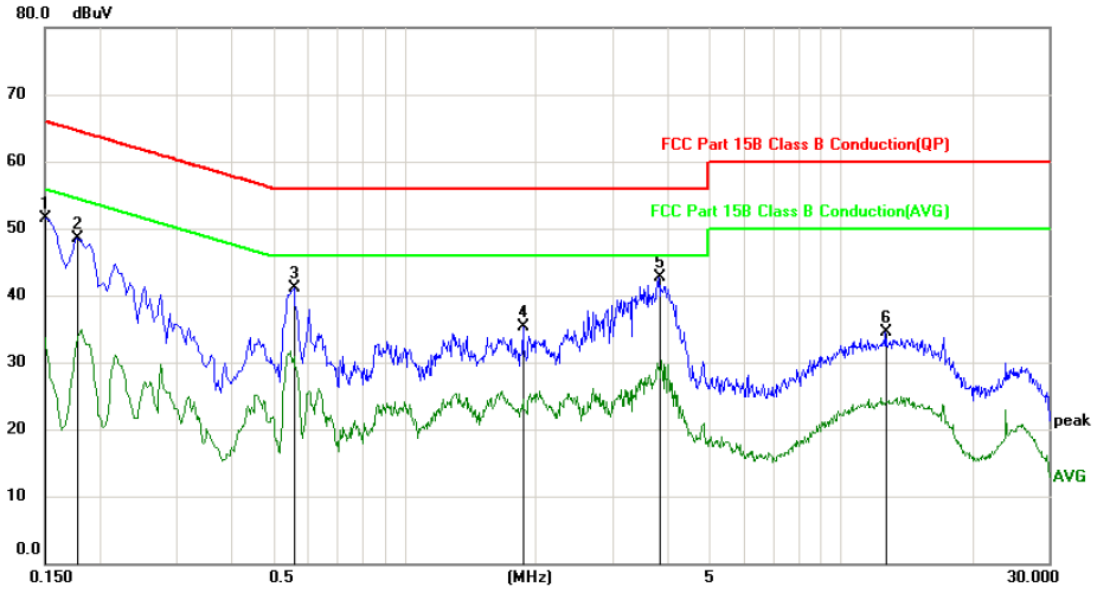
7.1.6. Test Results

Test Environment:	Temp.:	25 ℃	Humid.:	55 %	Press.:	96 kPa
Test Mode:	Mode 1					
Test Voltage:	DC 5 V (Notebook Computer Input AC 120 V/ 60 Hz)					
Test Result:	Pass					

Note:

L1 = Live Line / N = Neutral Line
Freq. = Emission frequency in MHz
Reading level (dBμV) = Receiver reading
Correct Factor (dB) = LISN factor + Cable loss
Measurement (dBμV) = Reading level (dBμV) + Corr. Factor (dB)
Limit (dBμV) = Limit stated in standard
Margin (dB) = Measurement (dBμV) – Limits (dBμV)
Q.P. =Quasi-Peak AVG =average
* is meaning the worst frequency has been tested in the frequency range 150 kHz to 30MHz.

Please refer to following diagram for individual



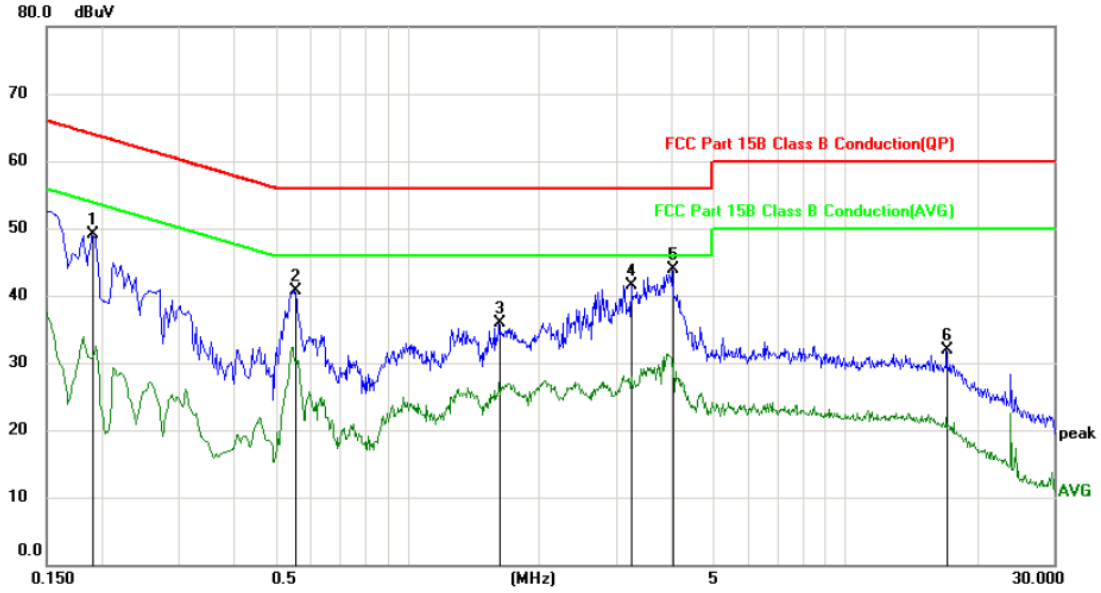
Site | Phase: *L1* | Temperature: 25

Limit: FCC Part 15B Class B Conduction(QP) | Power: | Humidity: 55 %

Mode: Working

Note: DC 5V(Notebook Computer Input AC 120V/60Hz)

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1500	41.35	10.23	51.58	66.00	-14.42	peak	
2		0.1770	38.36	10.22	48.58	64.63	-16.05	peak	
3		0.5595	30.80	10.23	41.03	56.00	-14.97	peak	
4		1.8690	24.80	10.44	35.24	56.00	-20.76	peak	
5	*	3.8220	32.22	10.47	42.69	56.00	-13.31	peak	
6		12.7094	23.90	10.63	34.53	60.00	-25.47	peak	



Site | Phase: N | Temperature: 25

Limit: FCC Part 15B Class B Conduction(QP) | Power: | Humidity: 55 %

Mode: Working

Note: DC 5V(Notebook Computer Input AC 120V/60Hz)

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1905	38.96	10.22	49.18	64.01	-14.83	peak	
2		0.5550	30.41	10.23	40.64	56.00	-15.36	peak	
3		1.6215	25.58	10.42	36.00	56.00	-20.00	peak	
4		3.2415	31.11	10.47	41.58	56.00	-14.42	peak	
5	*	4.0290	33.50	10.47	43.97	56.00	-12.03	peak	
6		17.0520	20.97	10.91	31.88	60.00	-28.12	peak	

7.2. Radiated Emission

7.2.1. Test Specification

Test Requirement:	FCC 47 CFR Part 15 Subpart B
Test Method:	ANSI C63.4: 2014
Frequency Range:	30 MHz to 1000 MHz
Measurement Distance:	3 m
Antenna Polarization:	Horizontal & Vertical

7.2.2. Limits

Frequency (MHz)	Class A (at 3m)	Class B (at 3m)
	dBuV/m	dBuV/m
30 ~ 88	49.0	40.0
88 ~ 216	53.5	43.5
216 ~ 960	56.4	46.0
960 ~ 1000	59.5	54.0

Note:

1. The lower limit shall apply at the transition frequencies.
2. Emission level dB(μV/m) = 20 log Emission level (μV/m).

7.2.3. Test Instruments

Radiated Emission Test Site (966)				
Name of Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Due**
EMI Test Receiver	R&S	ESIB7	100197	Jul. 17, 2019
Amplifier	HP	8447D	2727A05017	Sep. 16, 2019
Broadband Antenna	Schwarzbeck	VULB9163	340	Sep. 02, 2019
Antenna Mast	SKET	CC-A-4M	N/A	N/A
Coax cable (9KHz-1GHz)	TCT	RE-low-01	N/A	Sep. 16, 2019
Coax cable (9KHz-1GHz)	TCT	RE-low-03	N/A	Sep. 16, 2019
Test Software	Shurple Technology	EZ-EMC	FA-03A2	N/A

Note: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).

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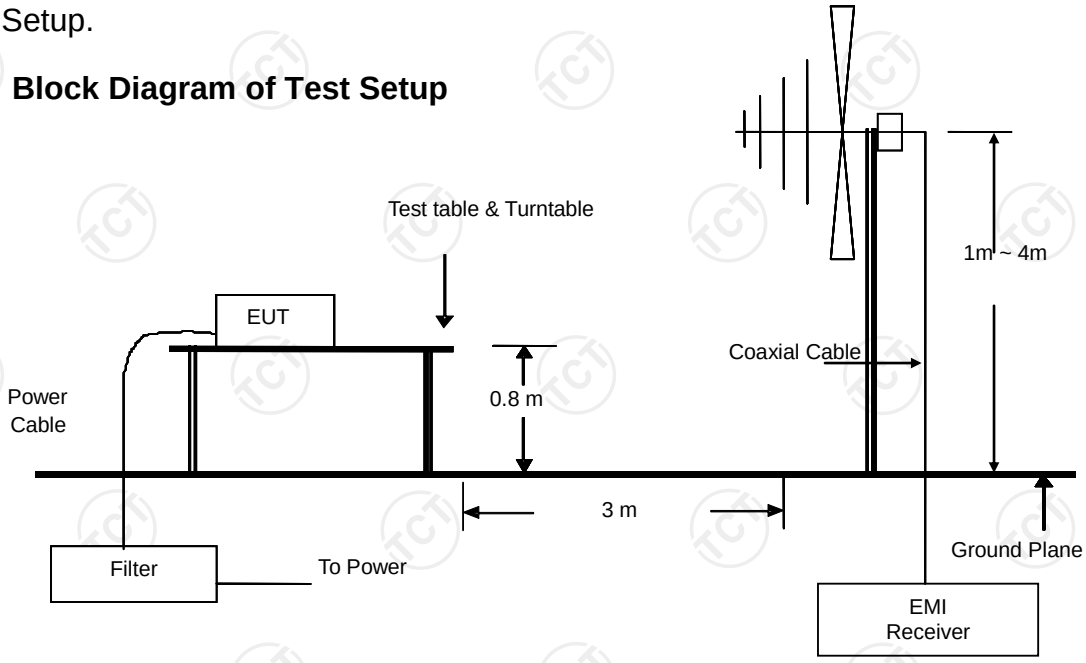
7.2.4. Test Method

Measurements were made in a 3-meter semi-anechoic chamber that complies to CISPR 16. Preliminary (peak) measurements were performed at an antenna to EUT separation distance of 3 meter. The EUT was rotated 360° about its azimuth with the receive antenna located at various heights in horizontal and vertical polarities. Final measurements (quasi-peak) were then performed by rotating the EUT 360° and adjusting the receive antenna height from 1 to 4 m. All frequencies were investigated in both horizontal and vertical antenna polarity, where applicable. Block Diagram of Test Setup.

7.2.5. Block Diagram of Test Setup



For the actual test configuration, please refer to the related item – Photographs of the Test Configuration

7.2.6. Test Results

Test Environment:	Temp.:	25 ℃	Humid.:	55%	Press.:	96 kPa
Test Mode:	Mode 1					
Test Voltage:	DC 5 V (Notebook Computer Input AC 120 V/ 60 Hz)					
Test Result:	Pass					

Note:

Freq. = Emission frequency in MHz

Reading level (dBμV/m) = Receiver reading

Corr. Factor (dB) = Antenna Factor + Cable Loss - AMP Factor

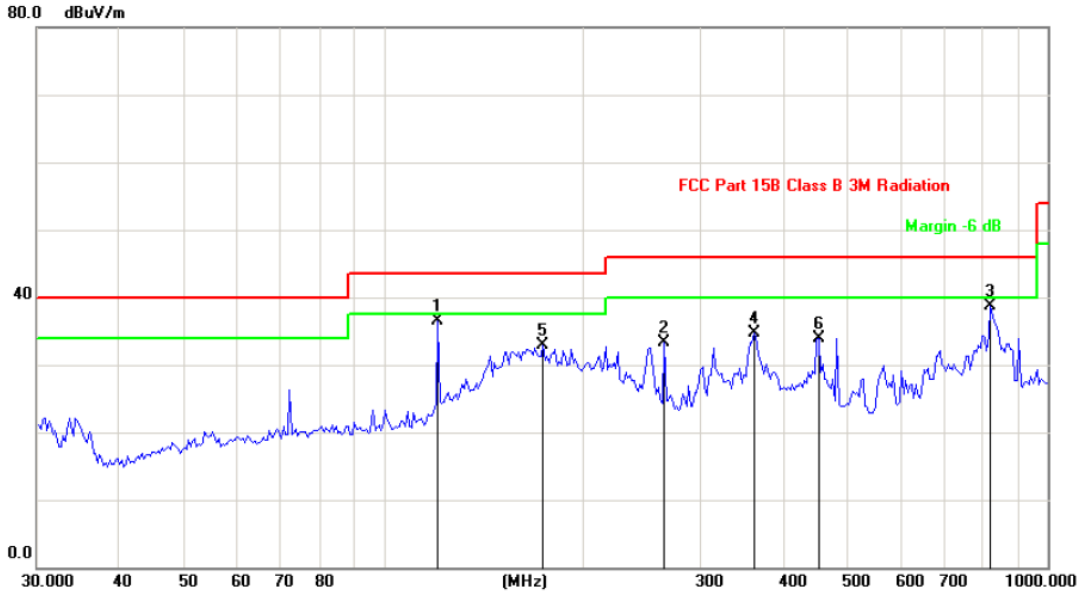
Measurement (dBμV/m) = Reading level (dBμV/m) + Corr. Factor (dB)

Limit (dBμV/m) = Limit stated in standard

Margin (dB) = Measurement (dBμV/m) – Limit (dBμV/m)

* is meaning the worst frequency has been tested in the test frequency range

Please refer to following diagram for individual



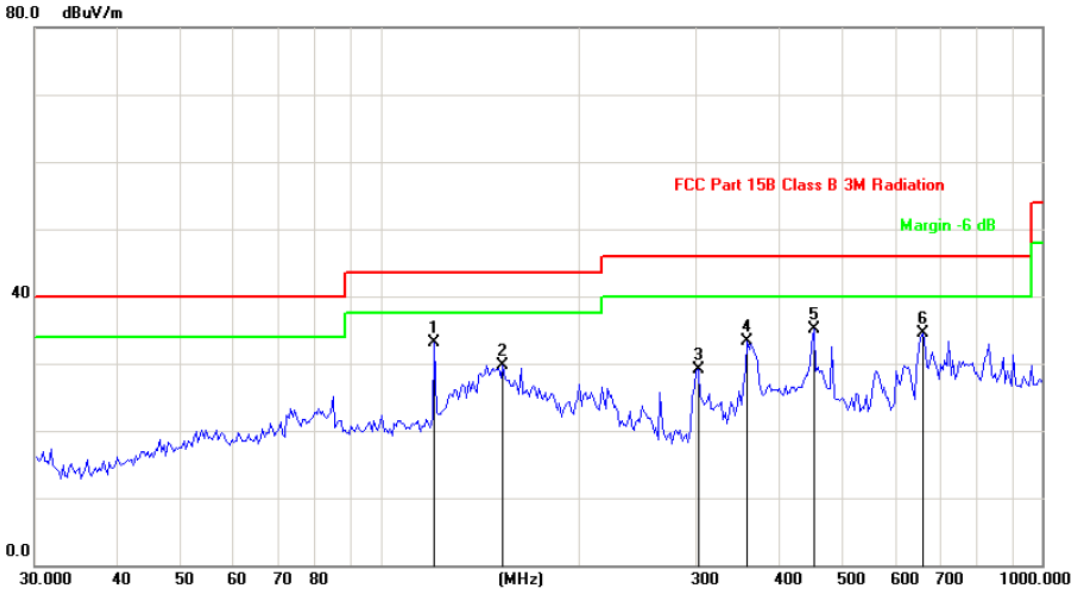
Site | Polarization: *Horizontal* | Temperature: 25

Limit: FCC Part 15B Class B 3M Radiation | Power: | Humidity: 55 %

Mode: Working

Note: DC 5 V (Notebook Computer Input AC 120 V/ 60 Hz)

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1	*	120.6118	48.25	-11.78	36.47	43.50	-7.03	peak			
2		264.9709	45.38	-12.07	33.31	46.00	-12.69	peak			
3		821.3871	43.11	-4.31	38.80	46.00	-7.20	peak			
4		360.9775	44.32	-9.53	34.79	46.00	-11.21	peak			
5		173.8146	48.17	-15.18	32.99	43.50	-10.51	peak			
6		452.0013	42.27	-8.28	33.99	46.00	-12.01	peak			



Site

Limit: FCC Part 15B Class B 3M Radiation

Mode: Working

Note: DC 5 V (Notebook Computer Input AC 120 V/ 60 Hz)

Polarization: *Vertical*

Power:

Temperature: 25

Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1	*	120.6118	44.82	-11.78	33.04	43.50	-10.46	peak			
2		153.1627	45.91	-16.11	29.80	43.50	-13.70	peak			
3		302.8192	39.98	-10.85	29.13	46.00	-16.87	peak			
4		358.4497	42.79	-9.56	33.23	46.00	-12.77	peak			
5		452.0013	43.43	-8.28	35.15	46.00	-10.85	peak			
6		660.6025	40.14	-5.56	34.58	46.00	-11.42	peak			

8. Photographs of Test Configuration

Conducted Emission Test View

Radiated Emission Test View

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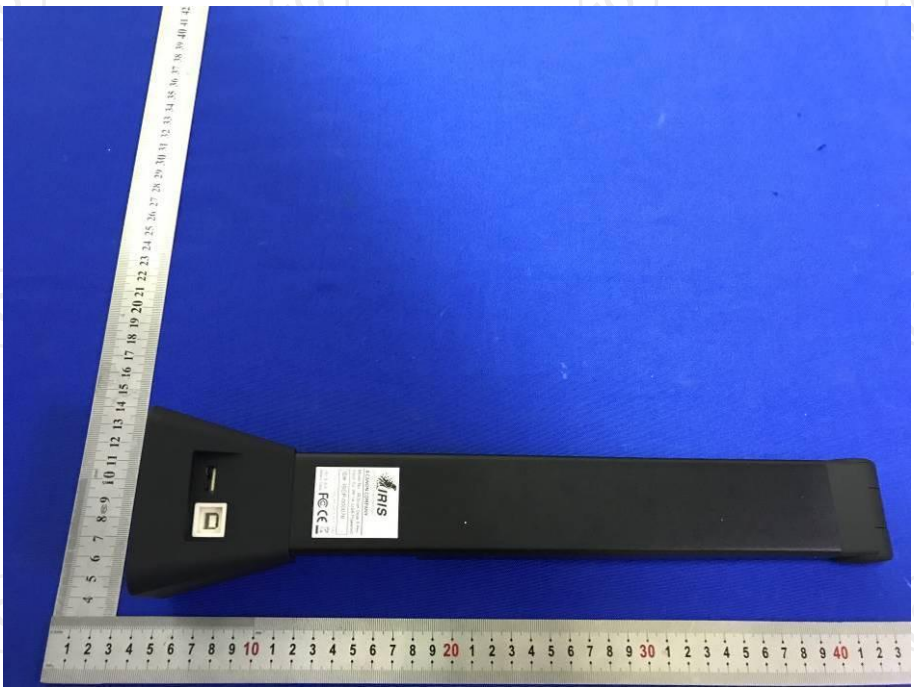
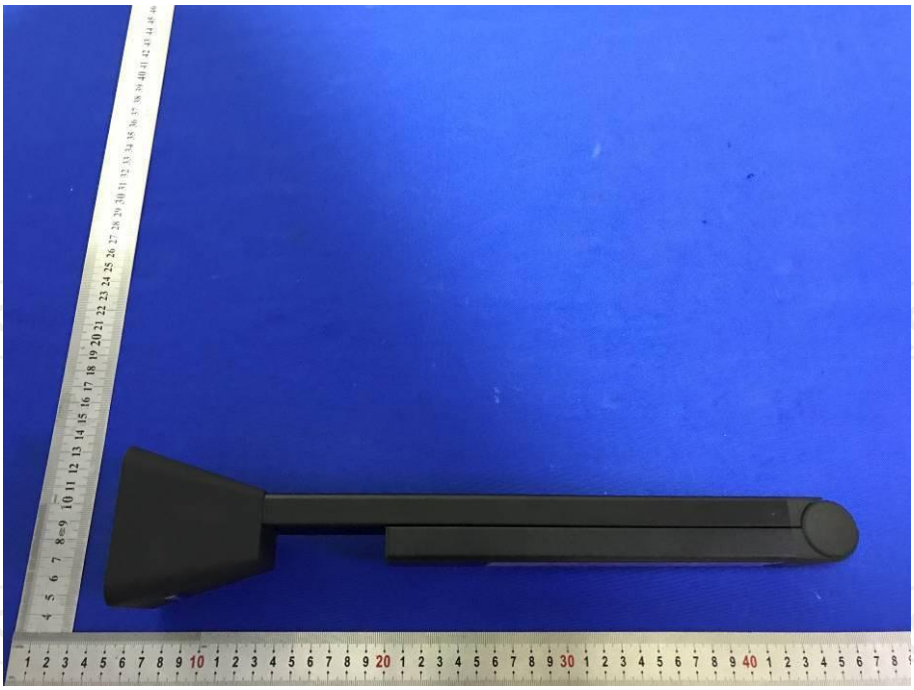
9. Photographs of EUT





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IRIS


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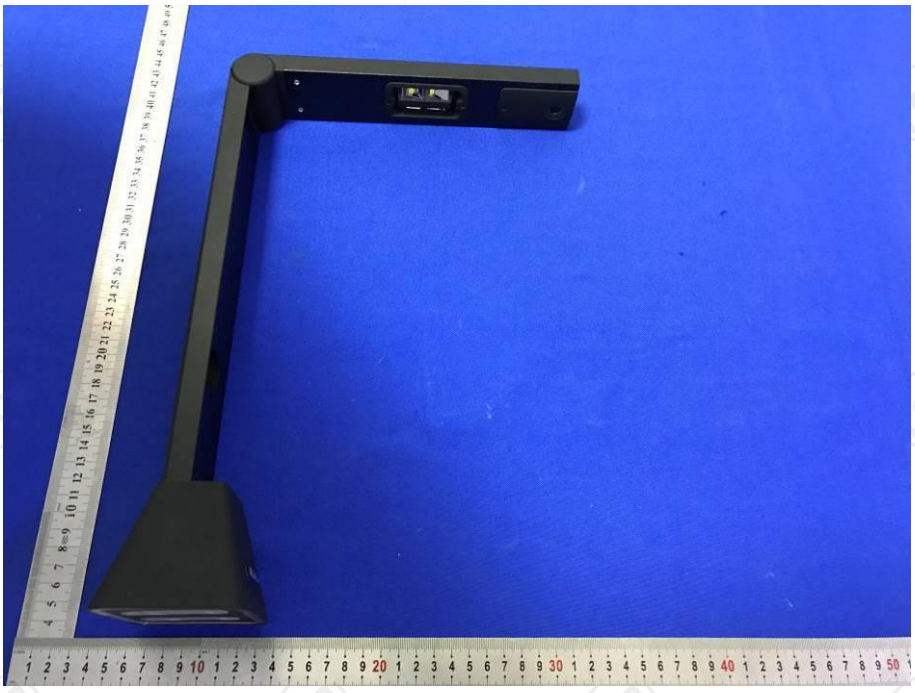
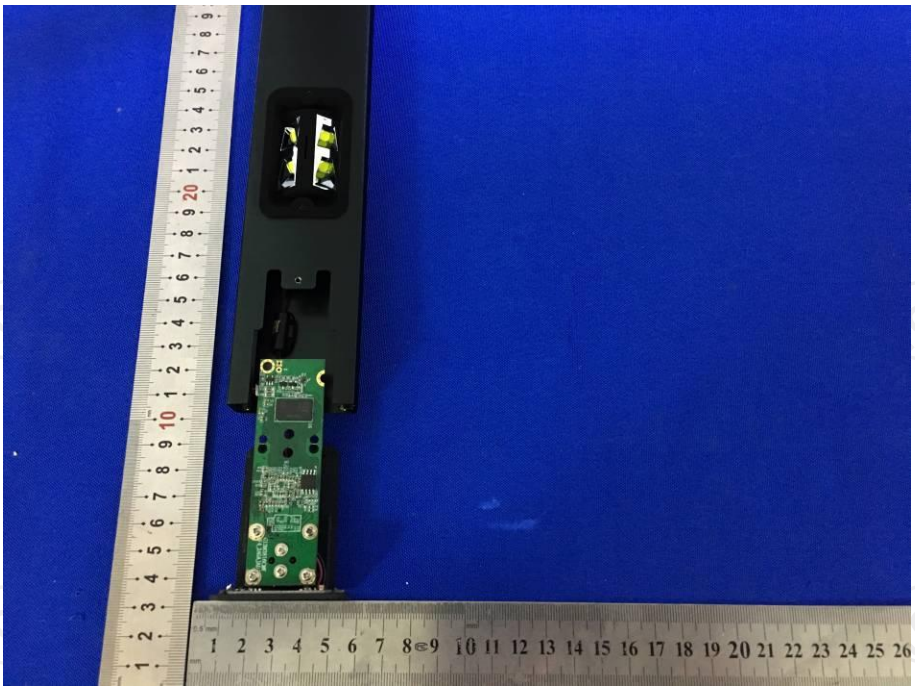
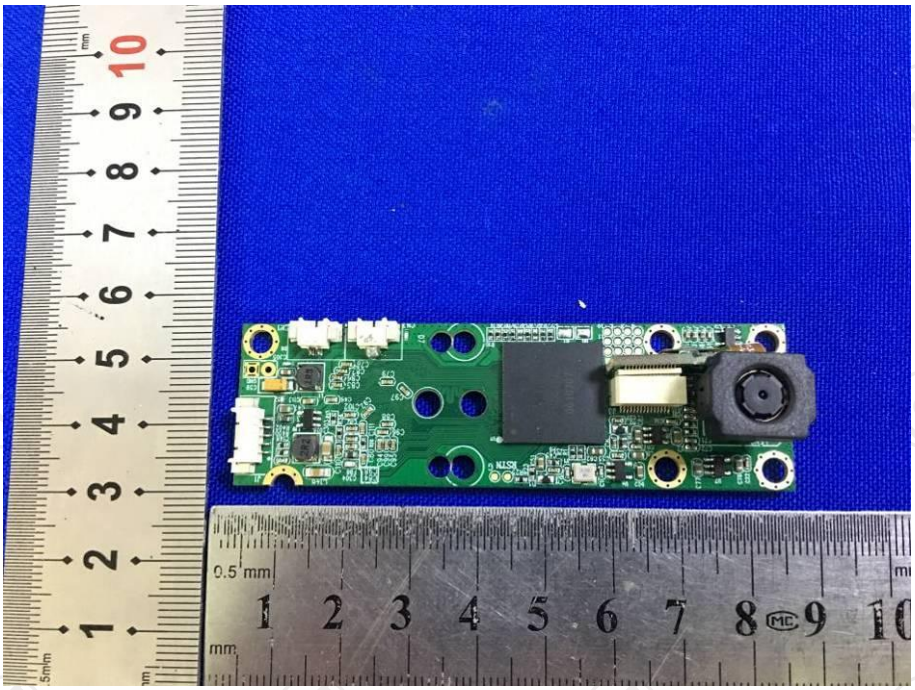
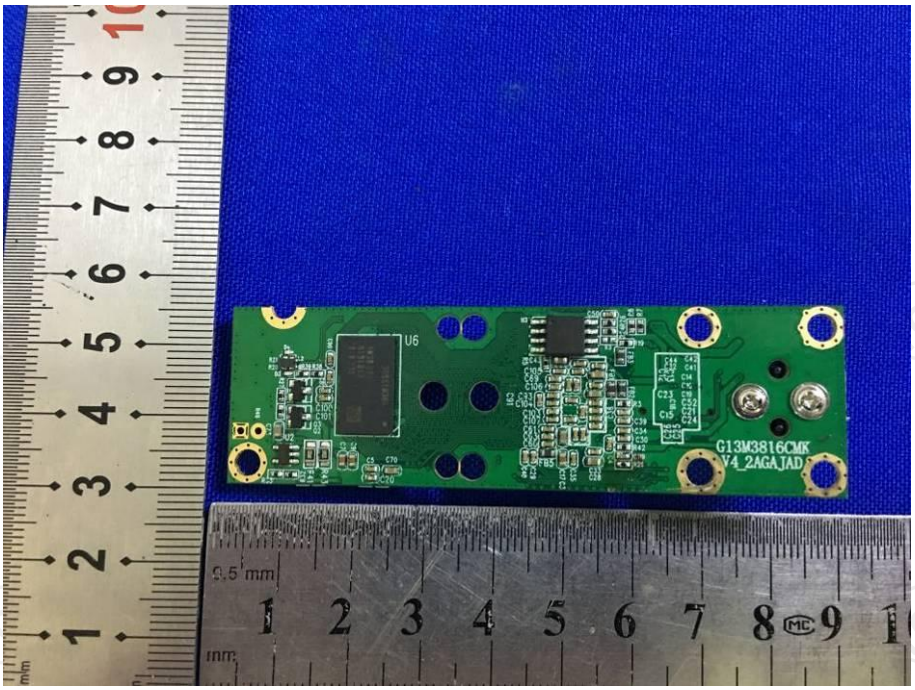
www.irislink.com/start





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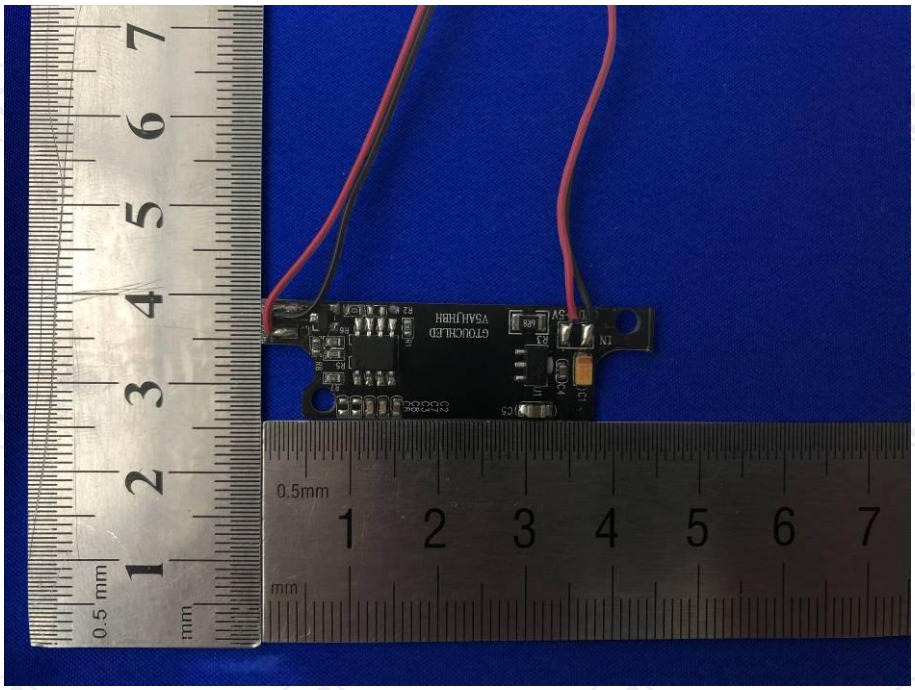
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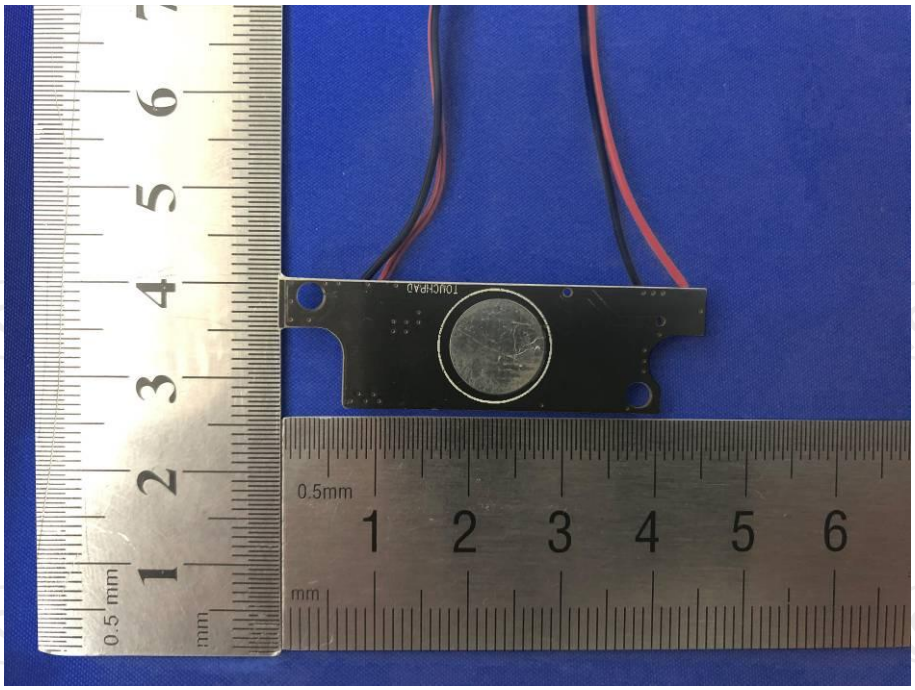
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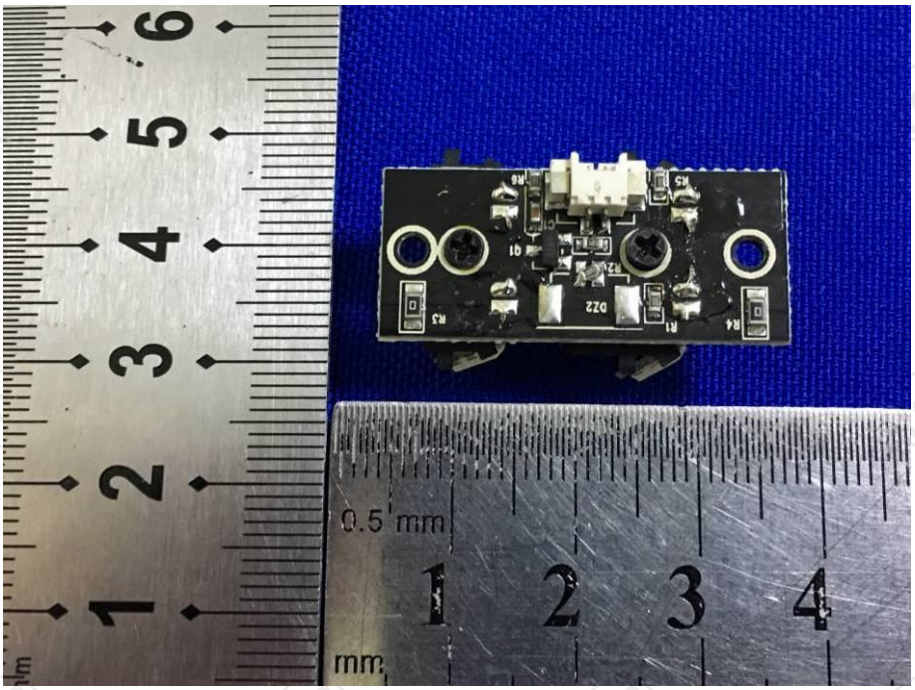
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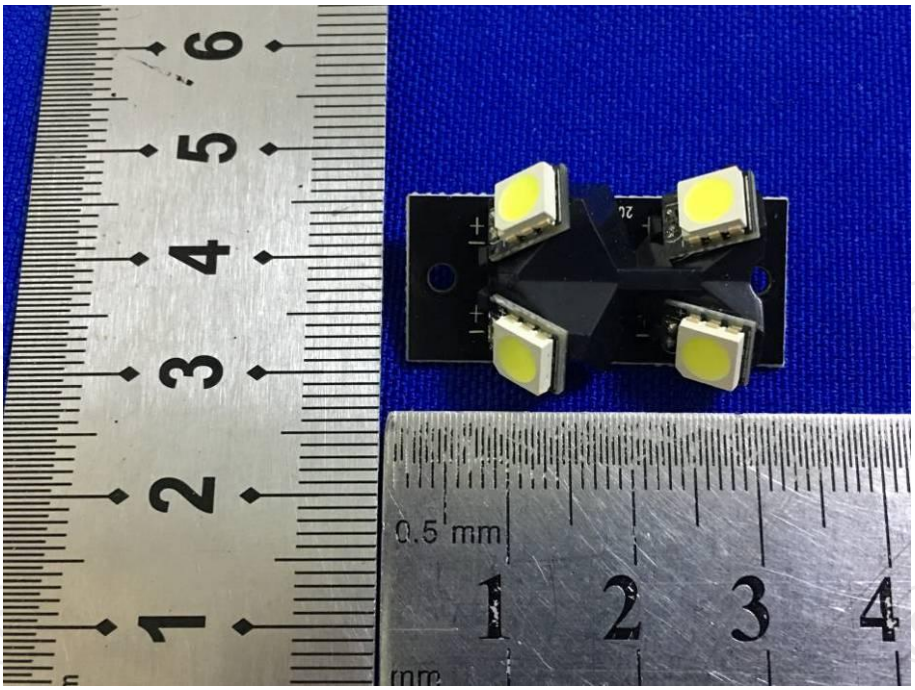
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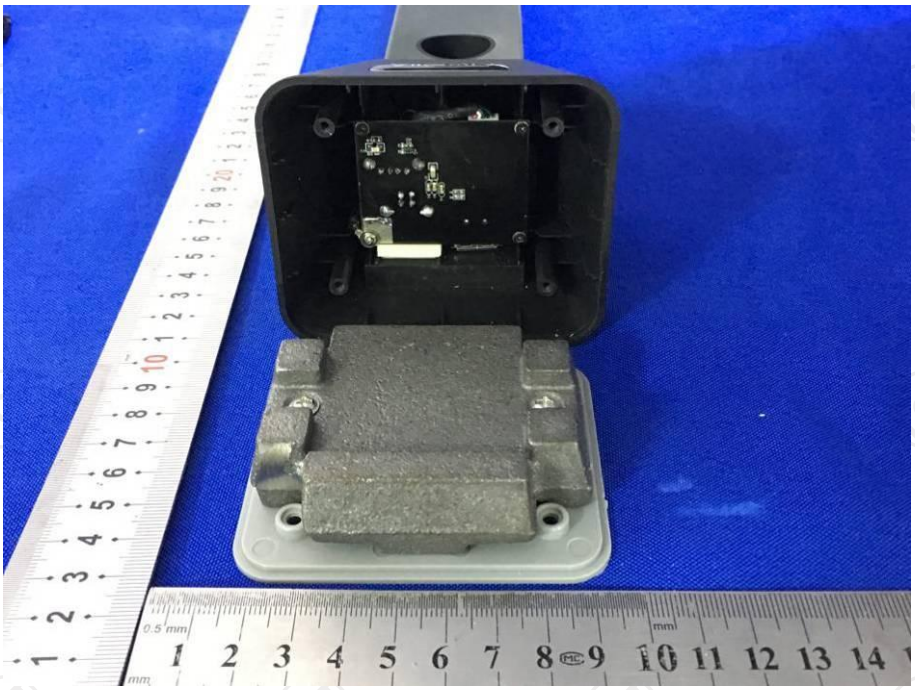

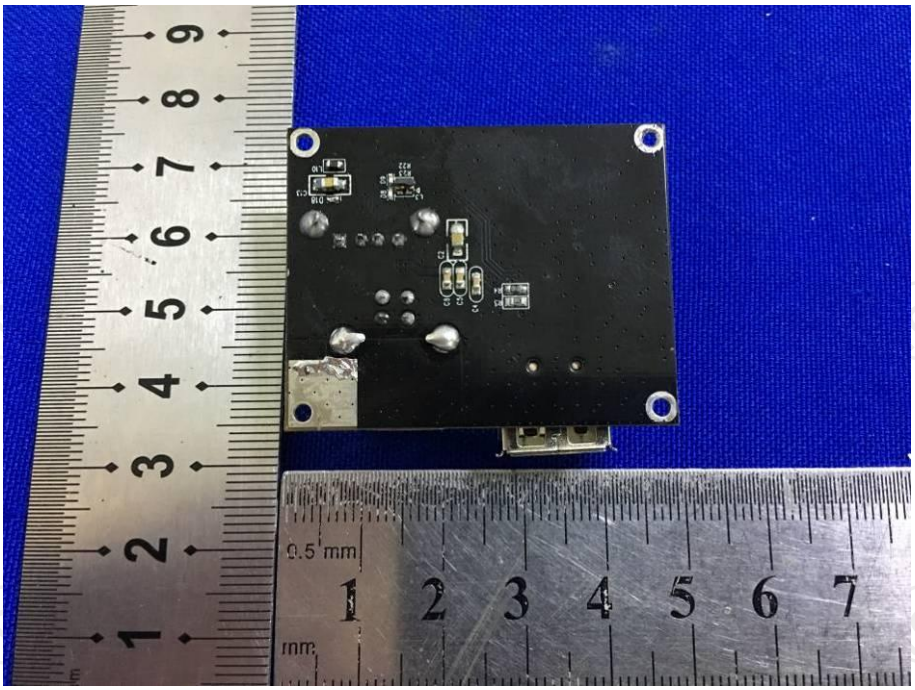
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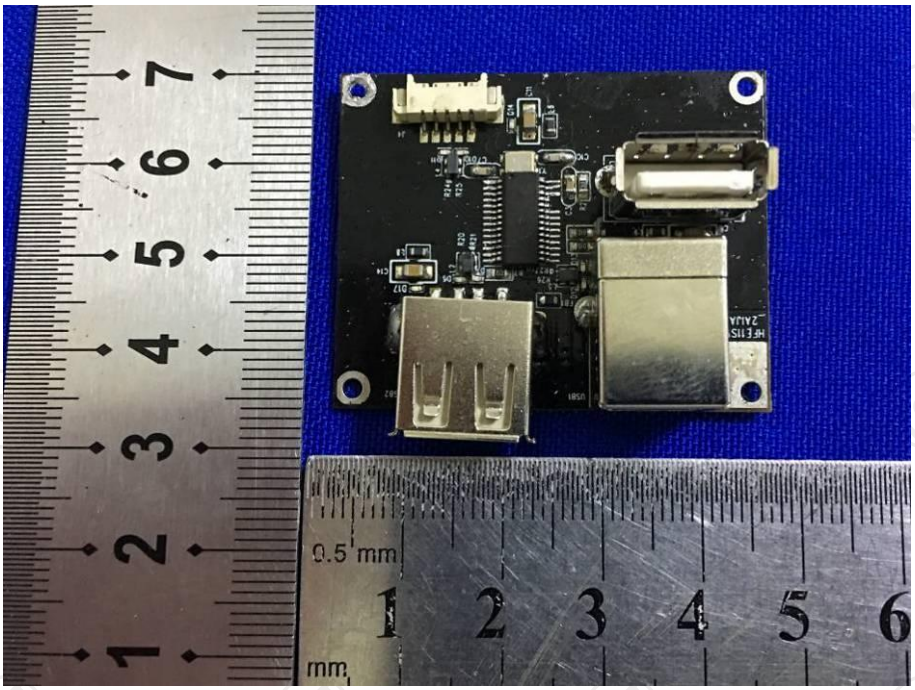
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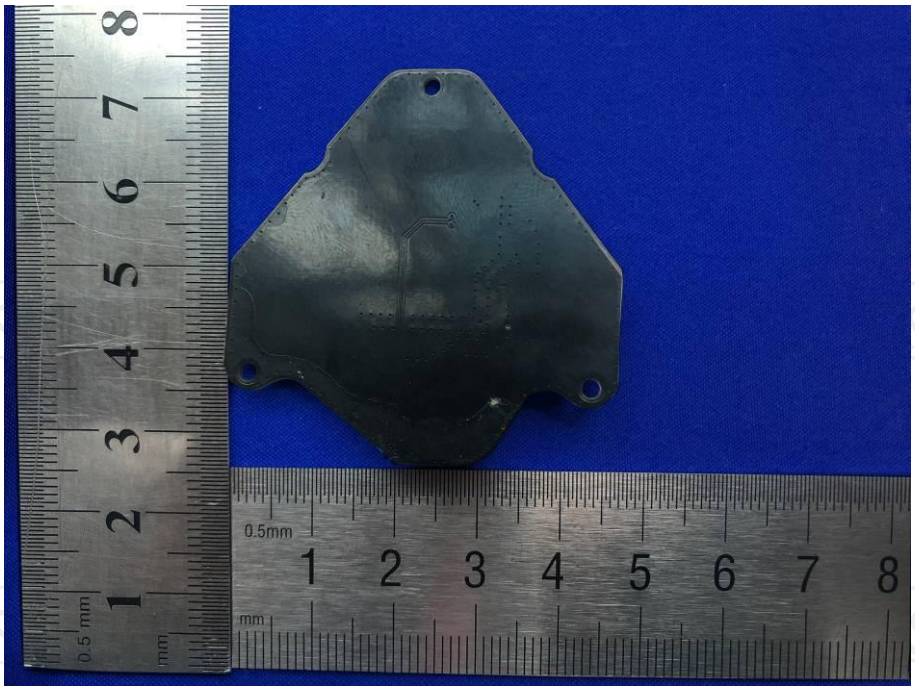
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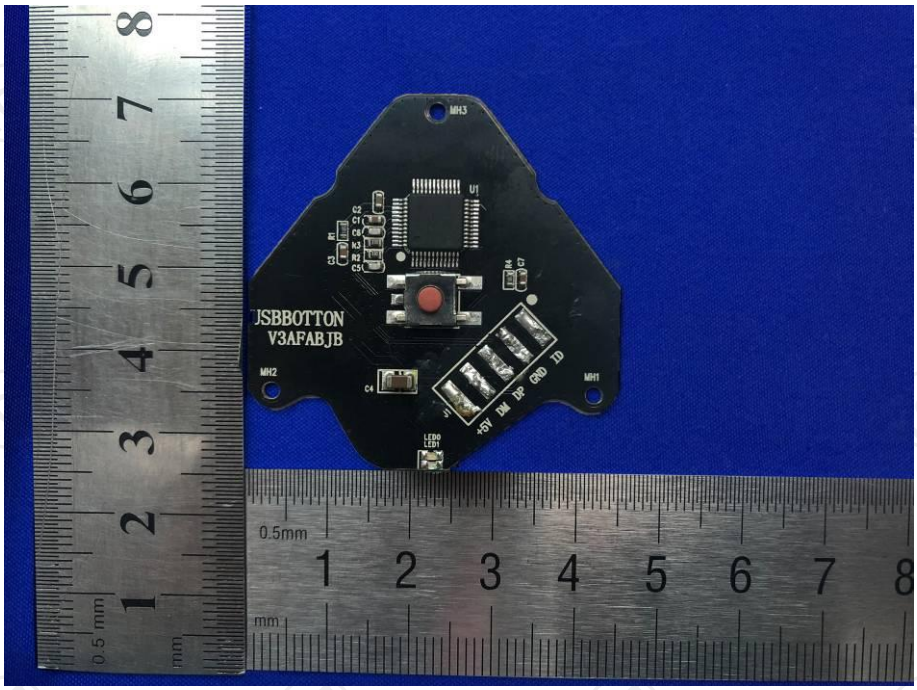
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