



# RoHS TEST REPORT

**Report Reference No**..... : **ZKT-2505128930R**

Date of issue..... : May. 16, 2025

Total number of pages..... 18

**Testing Laboratory**..... : **Shenzhen ZKT Technology Co., Ltd.**

Address..... : 1/F, No. 101, Building B, No. 6, Tangwei Community Industrial Avenue, Fuhai Street, Bao'an District, Shenzhen, China

**Applicant's name**..... : **ZhongShan Double Crown Electrical Appliance Co.,Ltd**

Address..... : NO.10 JIANLONG STREET JIDONGER INDUSTRIAL ZONE, XIAOLAN TOWN, ZHONGSHAN, CHINA

**Manufacturer's name** ..... : **ZhongShan Double Crown Electrical Appliance Co.,Ltd**

Address ..... : NO.10 JIANLONG STREET JIDONGER INDUSTRIAL ZONE, XIAOLAN TOWN, ZHONGSHAN, CHINA

**Test Requested:**

**Conclusion**

(1) RoHS Directive 2011/65/EU Annex II amending Annex (EU)2015/863 and amending Annex (EU)2017/2102  
—Lead, Cadmium, Mercury, Hexavalent Chromium, PBBs and PBDEs Content  
—Di-(2-ethylhexyl) phthalate(DEHP), Benzylbutyl phthalate(BBP), Dibutyl phthalate (DBP), Diisobutyl phthalate(DIBP) Content

PASS

**Test Report Form No**..... : --

Test Report Form(s) Originator..... : ZKT Testing

Master TRF..... : Dated: 2017-06

**This test report is specially limited to the above client company and product model only. It may not be duplicated without prior written consent of ZKT Test.**

**Test item description**..... : **Electrical Fan**

Trade Mark..... : DOUBLE CROWN

KYT30-A

KYT50-A, KYT45-A, KYT40-H, KYT35-E, KYT35-F, KYT35-G, KYT35-J, KYT35-L, KYT35-M, KYT30B-C, KYT30B-D, KYT50-A,

KYT50-B, KYT50-C, FS725-A, FS725-B, FS725-C, FS115-A,

Model/Type reference..... : FS90-A, FS80-A, FS725-D, FS725B-C, KYT50-D, KYT50-E,

KYT30-A, KYT30-B, KYT30-C, KYT30-F, KYT30-J, KYT30-G,

KYT30-M, KYT30-H, KYT25-C, KYT25-B, KYT25-D, KYT25-E,

KYT25-H, KYT25-G, KYT25-J, KYT25-K, KYT25-L, KYT25-M,

KYT25-P, KYT25-Q, KYT20-A, KYT22-A



**Testing procedure and testing location:**

**Testing Laboratory**.....: **Shenzhen ZKT Technology Co., Ltd.**

**Address**.....: 1/F, No. 101, Building B, No. 6, Tangwei Community  
Industrial Avenue, Fuhai Street, Bao'an District,  
Shenzhen, China

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**Date of Test**.....: May. 12, 2025 - May. 16, 2025


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**Tested by (name + signature)**.....: Doris Zhan 

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**Reviewer (name + signature)**.....: Peter Huang 

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**Approved (name + signature)**.....: Awen He 

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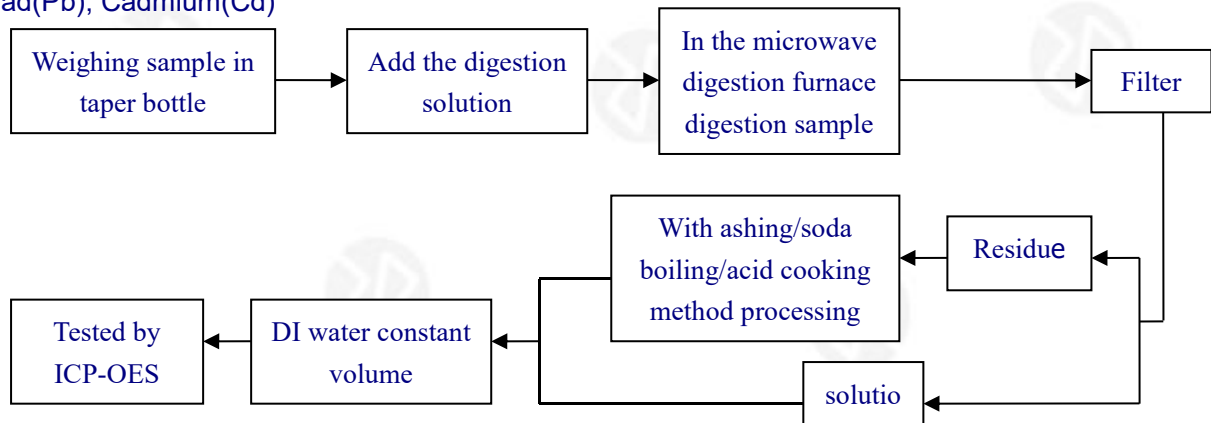
**Test Method:**

Test item(s)	Test Method(s)	Equipment(s)	MDL
<b>Chemical Testing</b>			
Mercury(Hg)	IEC 62321-4:2013+A1:2017	ICP-OES	2mg/kg
Lead(Pb)	IEC 62321-5:2013	ICP-OES	2mg/kg
Cadmium(Cd)	IEC 62321-5:2013	ICP-OES	2mg/kg
PBB	IEC 62321-6:2015	GC-MS	2mg/kg
PBDE			2mg/kg
Chromium(Cr VI) for colourless and coloured corrosion-protected coatings on metals	IEC 62321-7-1:2015	UV-Vis	0.10µg/cm <sup>2</sup>
Chromium(Cr VI) for polymers and electronics	IEC 62321-7-2:2017	UV-Vis	2mg/kg
DEHP	IEC 62321-8:2017	GC-MS	30mg/kg
DBP			30mg/kg
BBP			30mg/kg
DIBP			30mg/kg

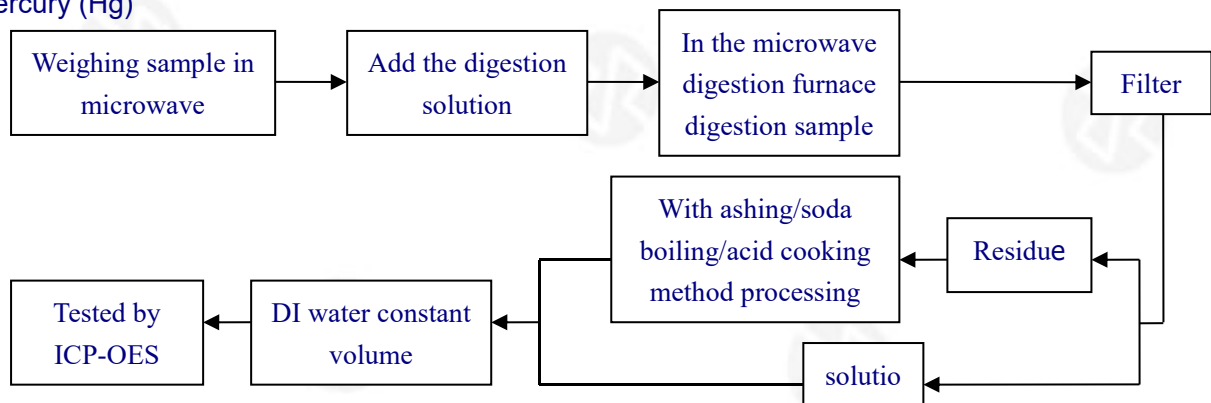


### Test Flow:

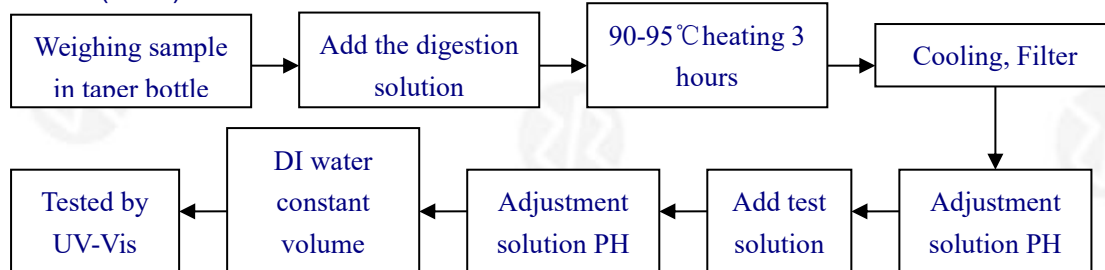
#### 1. Lead(Pb), Cadmium(Cd)



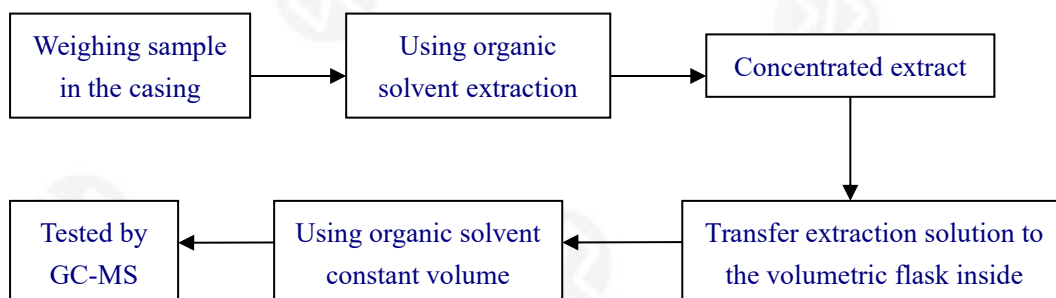
#### 2. Mercury (Hg)



#### 3. Chromium(Cr VI)

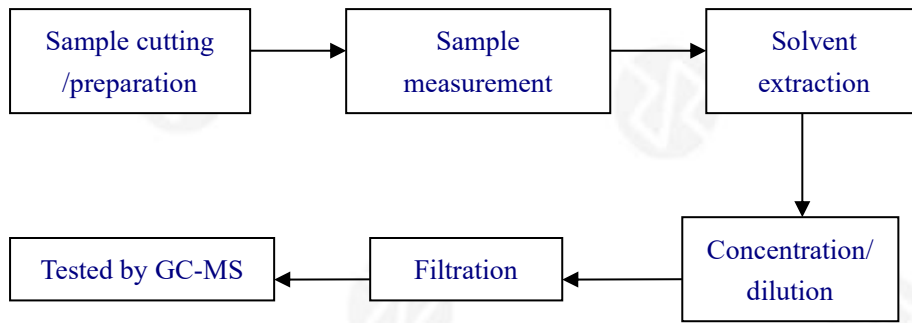


#### 4. PBBs/ PBDEs





### 5. DEHP/ BBP/ DBP/ DIBP





### Test Item Description And Photo List:

Sample No.	Description
001	Blue plastic
002	White plastic
003	White semi-transparent plastic
004	Silver metal
005	PCB
006	tin
007	Fan capacitor
008	Transparent plastic
009	Black semi-transparent plastic
010	Black plastic
011	Motor-Beige plastic
012	Motor-Silver metal
013	Motor-Copper wire
014	Motor-Magnet
015	Copper wire
016	screw
017	Copper metal
018	Ferrous metal
019	Black wire
020	Yellow wire
021	Blue wire
022	Red wire
023	White wire
024	White plastic wire jacket
025	Black plastic wire jacket



### Test Results:

**Screening test for the specified hazardous substances of RoHS for the selected materials of the submitted sample:**

- Heavy Metal (Cadmium, Chromium, Mercury, Lead) Content Test
- Bromine Content Test

According to IEC 62321-3-1:2013, and Quantification analyzed with Energy Dispersive X-ray Fluorescence Spectrometers.

Sample No.	Total Cadmium	Total Lead	Total Mercury	Total Chromium	Total Bromine
Sample 001	BL	BL	BL	BL	BL
Sample 002	BL	BL	BL	BL	BL
Sample 003	BL	BL	BL	BL	BL
Sample 004	BL	BL	BL	BL	N.A.
Sample 005	BL	BL	BL	BL	BL
Sample 006	BL	BL	BL	BL	N.A.
Sample 007	BL	BL	BL	BL	BL
Sample 008	BL	BL	BL	BL	BL
Sample 009	BL	BL	BL	BL	BL
Sample 010	BL	BL	BL	BL	BL
Sample 011	BL	BL	BL	BL	BL
Sample 012	BL	BL	BL	BL	N.A.
Sample 013	BL	BL	BL	BL	N.A.
Sample 014	BL	BL	BL	BL	N.A.
Sample 015	BL	BL	BL	BL	N.A.
Sample 016	BL	BL	BL	BL	N.A.
Sample 017	BL	BL	BL	BL	N.A.
Sample 018	BL	BL	BL	BL	N.A.
Sample 019	BL	BL	BL	BL	BL
Sample 020	BL	BL	BL	BL	BL
Sample 021	BL	BL	BL	BL	BL
Sample 022	BL	BL	BL	BL	BL
Sample 023	BL	BL	BL	BL	BL
Sample 024	BL	BL	BL	BL	BL
Sample 025	BL	BL	BL	BL	BL



Note:

All Concentrations express in “mg/kg” (milligram per kilogram), mg/kg ~ ppm

“OL” denotes “over limit”

“BL” denotes “below limit”

“N.A.” denotes “Not Applicable”

“Inconclusive” denotes result is intermediate between “OL” and “BL”

“A” denotes the screening result was inconclusive(X) or over limit (OL), thus further confirmation test was conducted, results are listed in 3.2 and 3.3.



XRF screening limits for different materials:

Materials	Concentration (mg/kg)				
	Cd	Cr	Pb	Hg	Br
<b>Metal</b>	$BL \leq (70-3\sigma) < X < (130+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X$	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	N.A.
<b>Polymers</b>	$BL \leq (70-3\sigma) < X < (130+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X$	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (300-3\sigma) < X$
<b>Composite material</b>	$BL \leq (50-3\sigma) < X < (150+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < X$	$BL \leq (500-3\sigma) < X < (1500+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < X < (1500+3\sigma) \leq OL$	$BL \leq (250-3\sigma) < X$



**Test for Heavy Metals:**

**Lead, Cadmium, Hexavalent Chromium and Mercury Tests according to IEC 62321-4:2013+A1:2017 & IEC 62321-5:2013 & IEC 62321-7-1:2015 & IEC 62321-7-2:2017, Analysis was conducted by ICP-OES, UV-VIS.**

<b>Element</b>	<b>Total Cadmium [mg/kg]</b>	<b>Total Lead [mg/kg]</b>	<b>Total Mercury [mg/kg]</b>	<b>Hexavalent Chromium [<math>\mu\text{g}/\text{cm}^2</math>]</b>	<b>Hexavalent Chromium [mg/kg]</b>
<b>Detection Limit</b>	5	5	5	0.10	5
<b>Limit</b>	100	1000	1000	0.10	1000

Note:

1. All Concentrations express in “mg/kg”(milligram per kilogram), mg/kg ~ ppm.
2. “N.D.” = “Not Detected”.
3. Boiling-water-extraction:  
 Negative = Absence of Cr(VI) coating / surface layer: the detected concentration in boiling-water-extraction solution is less than 0.10 $\mu\text{g}$  with 1cm<sup>2</sup> sample surface area. Positive = Presence of Cr(VI) coating / surface layer: the detected concentration in boiling-water-extraction solution is greater than 0.13 $\mu\text{g}$  with 1cm<sup>2</sup> sample surface area.  
 Inconclusive =the detected concentration in boiling-water-extraction solution is greater than 0.10 $\mu\text{g}$  and less than 0.13 $\mu\text{g}$  with 1cm<sup>2</sup> sample surface area.
4. Positive = result be regarded as not comply with RoHS requirement  
 Negative = result be regarded as comply with RoHS requirement
5. “-” =Not regulated



**Test for Flame retardants :**

**Test Method: With reference to IEC 62321-6:2015, extracted by toluene and analyzed by Gas Chromatography and Mass Spectrometry (GC-MS). [Reporting Limit: 5mg/kg]**

Test Item		Result [mg/kg]	RoHS Requirement [mg/kg]
		Sample 005	
PBBs	Monobromobiphenyl	< 5	Sum of PBBs < 1000
	Dibromobiphenyl	< 5	
	Tribromobiphenyl	< 5	
	Tetrabromobiphenyl	< 5	
	Pentabromobiphenyl	< 5	
	Hexabromobiphenyl	< 5	
	Heptabromobiphenyl	< 5	
	Octabromobiphenyl	< 5	
	Nonabromobiphenyl	< 5	
	Decabromobiphenyl	< 5	
	Sum of PBBs	< 5	
PBDEs	Monobromodiphenyl Ether	< 5	Sum of PBDEs < 1000
	Dibromodiphenyl Ether	< 5	
	Tribromodiphenyl Ether	< 5	
	Tetrabromodiphenyl Ether	< 5	
	Pentabromodiphenyl Ether	< 5	
	Hexabromodiphenyl Ether	< 5	
	Heptabromodiphenyl Ether	< 5	
	Octabromodiphenyl Ether	< 5	
	Nonabromodiphenyl Ether	< 5	
	Decabromodiphenyl Ether	< 5	
	Sum of PBDEs	< 5	

Note:

1. All Concentrations express in “mg/kg” (milligram per kilogram), mg/kg ~ ppm.
2. “<” denotes less than



**Di-(2-ethylhexyl) phthalate(DEHP), Benzylbutyl phthalate(BBP), Dibutyl phthalate (DBP), Diisobutyl phthalate (DIBP) Content—RoHS Directive 2011/65/EU Annex II amending Annex (EU)2017/2102**

Test method: With reference to IEC 62321-8:2017; Analysis was conducted by GC-MS.

<b>Element</b>	<b>Di-(2-ethylhexyl) phthalate (DEHP) [mg/kg]</b>	<b>Benzylbutyl phthalate (BBP) [mg/kg]</b>	<b>Dibutyl phthalate (DBP) [mg/kg]</b>	<b>Diisobutyl phthalate(DIBP) [mg/kg]</b>
<b>Detection Limit</b>	<b>50</b>	<b>50</b>	<b>50</b>	<b>50</b>
<b>Limit</b>	<b>1000</b>	<b>1000</b>	<b>1000</b>	<b>1000</b>
Sample 001	N.D.	N.D.	N.D.	N.D.
Sample 002	N.D.	N.D.	N.D.	N.D.
Sample 003	N.D.	N.D.	N.D.	N.D.
Sample 005	N.D.	N.D.	N.D.	N.D.
Sample 007	N.D.	N.D.	N.D.	N.D.
Sample 008	N.D.	N.D.	N.D.	N.D.
Sample 009	N.D.	N.D.	N.D.	N.D.
Sample 010	N.D.	N.D.	N.D.	N.D.
Sample 011	N.D.	N.D.	N.D.	N.D.
Sample 019	N.D.	N.D.	N.D.	N.D.
Sample 020	N.D.	N.D.	N.D.	N.D.
Sample 021	N.D.	N.D.	N.D.	N.D.
Sample 022	N.D.	N.D.	N.D.	N.D.
Sample 023	N.D.	N.D.	N.D.	N.D.
Sample 024	N.D.	N.D.	N.D.	N.D.
Sample 025	N.D.	N.D.	N.D.	N.D.

**Note:**

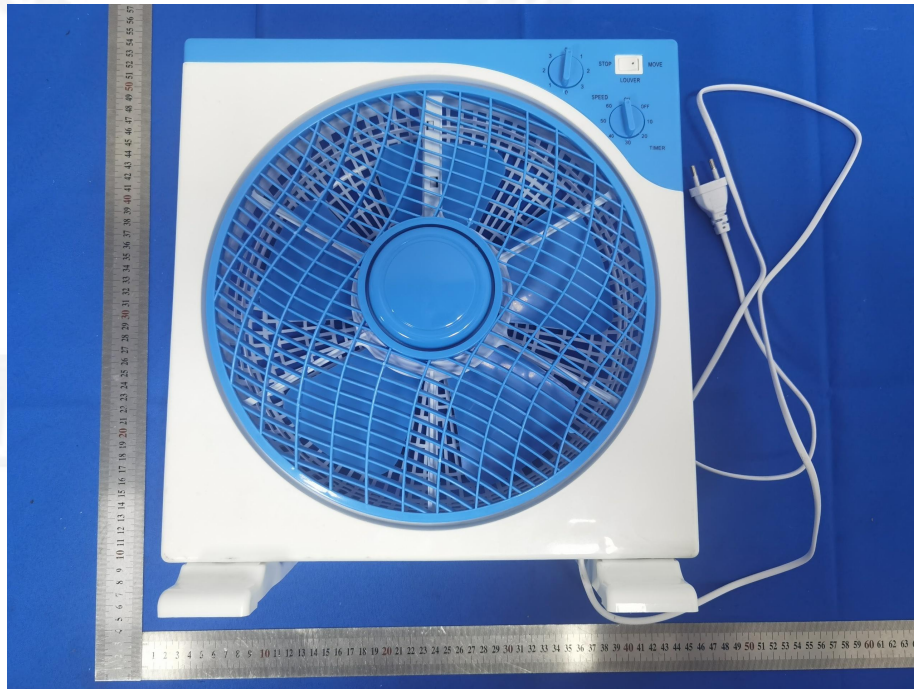
All Concentrations express in “mg/kg”(milligram per kilogram), mg/kg ~ ppm.

“N.D.” = “Not Detected”.

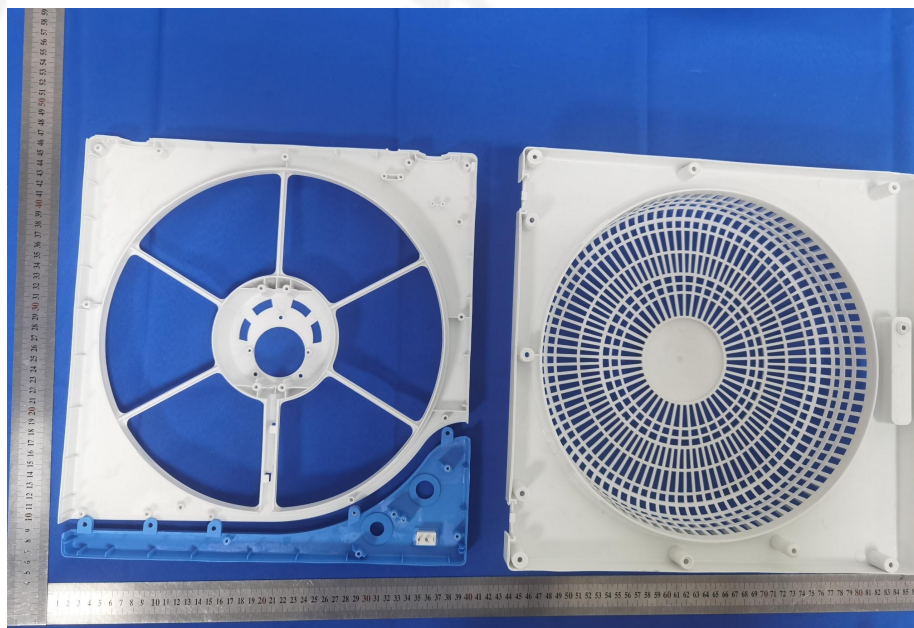


## ANNEX A: Photo-documentation

EUT Photo 1



EUT Photo 2

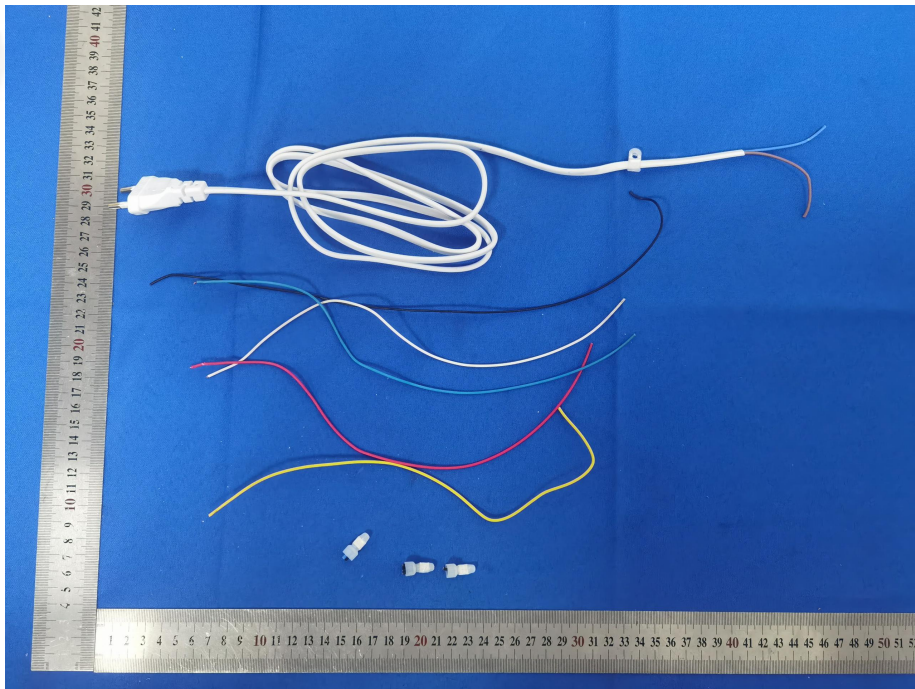




EUT Photo 3

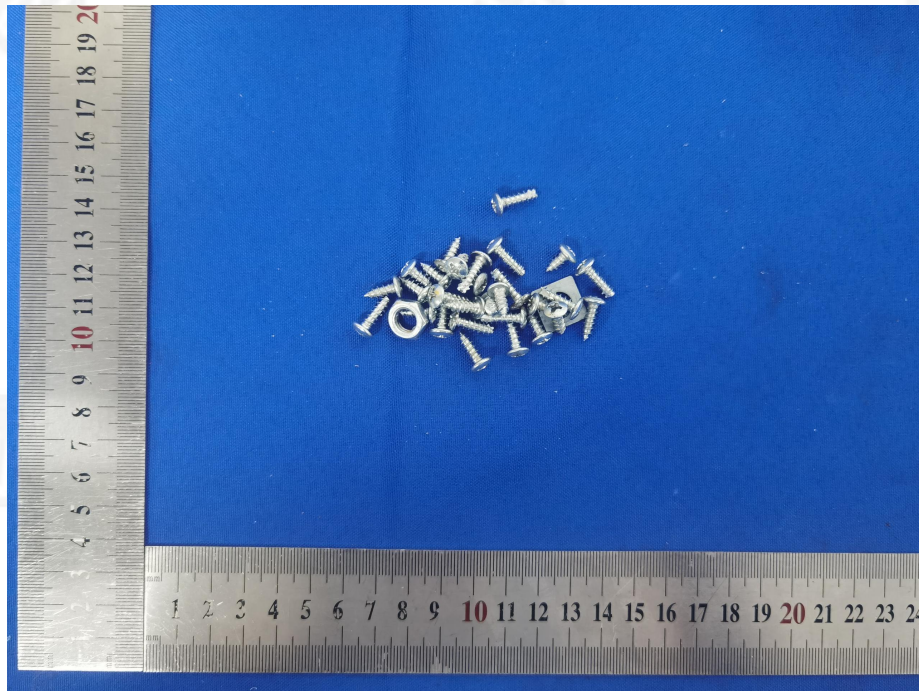


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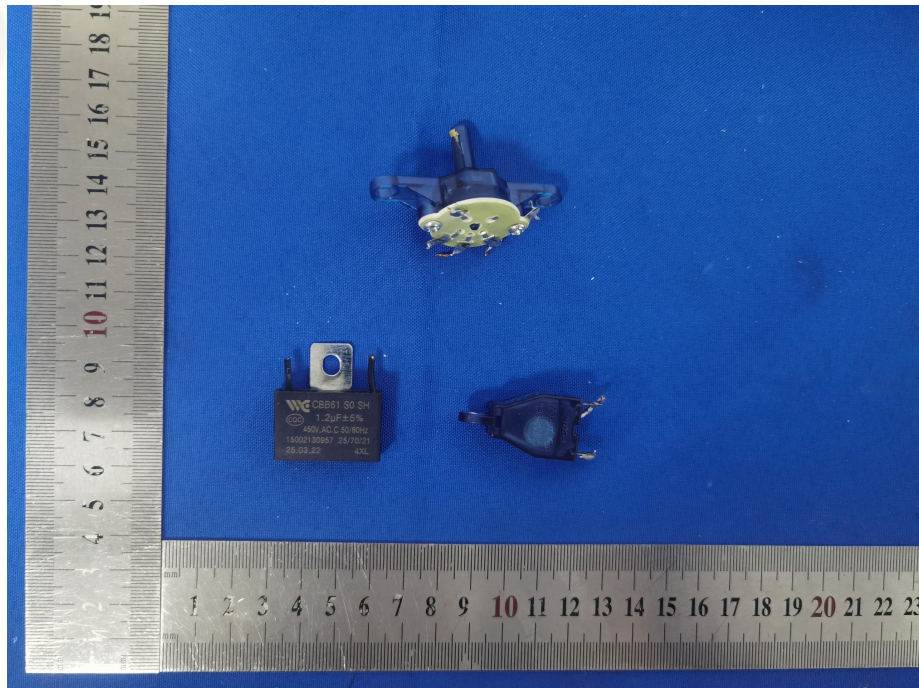




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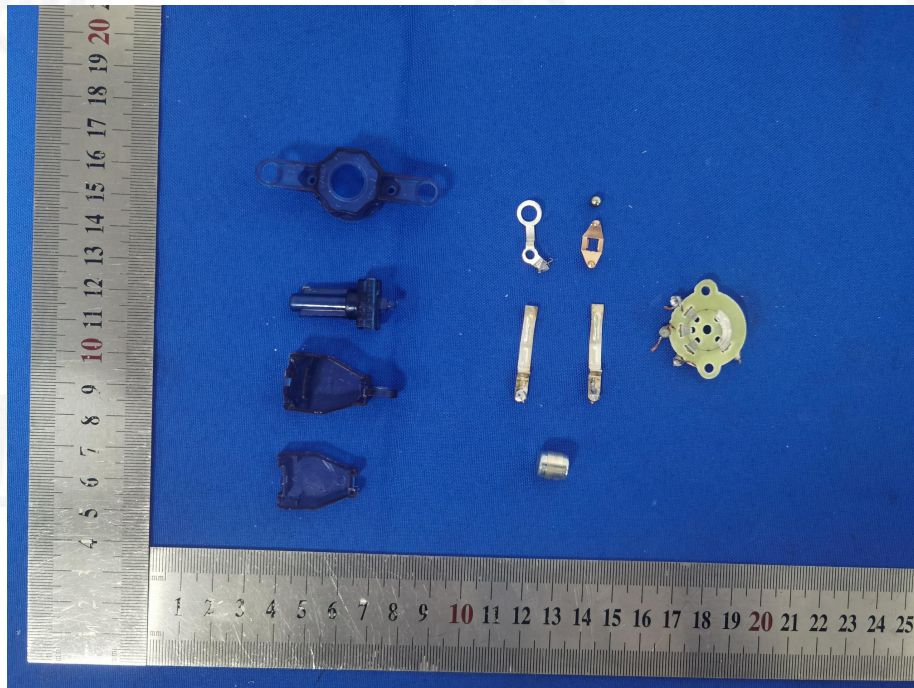


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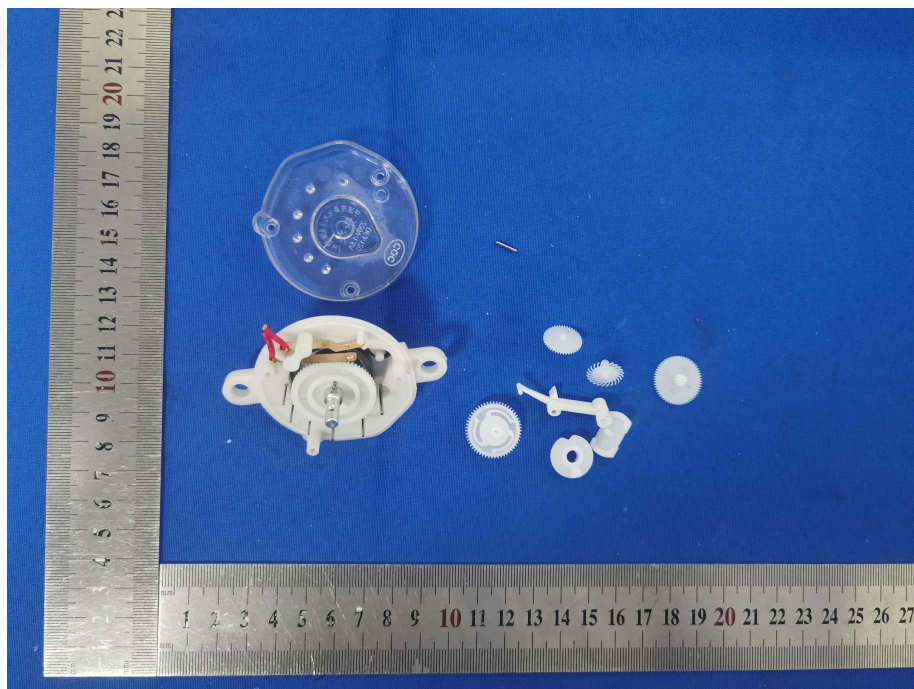




EUT Photo 7



EUT Photo 8

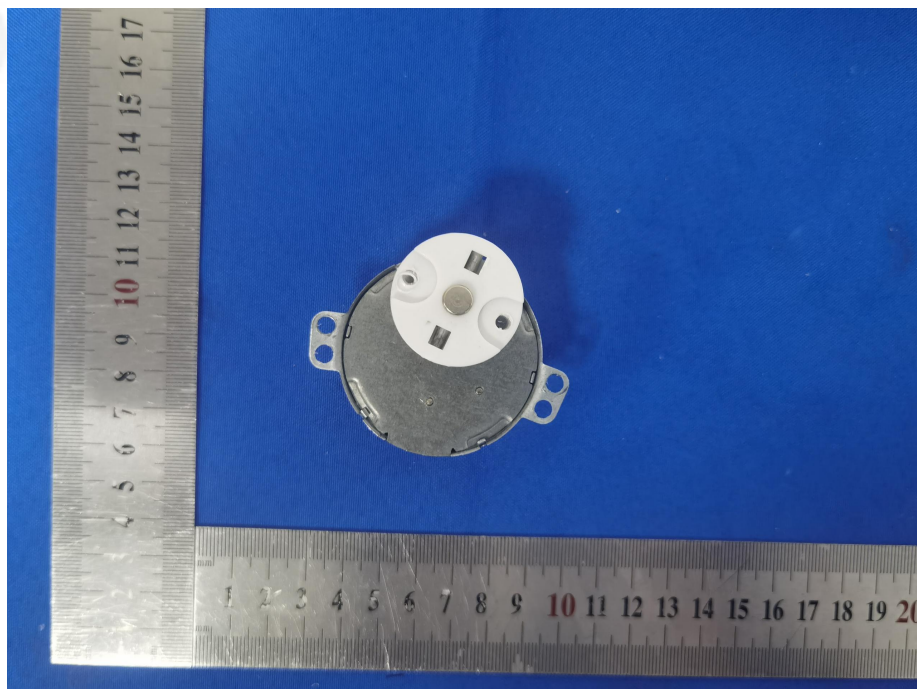




EUT Photo 9

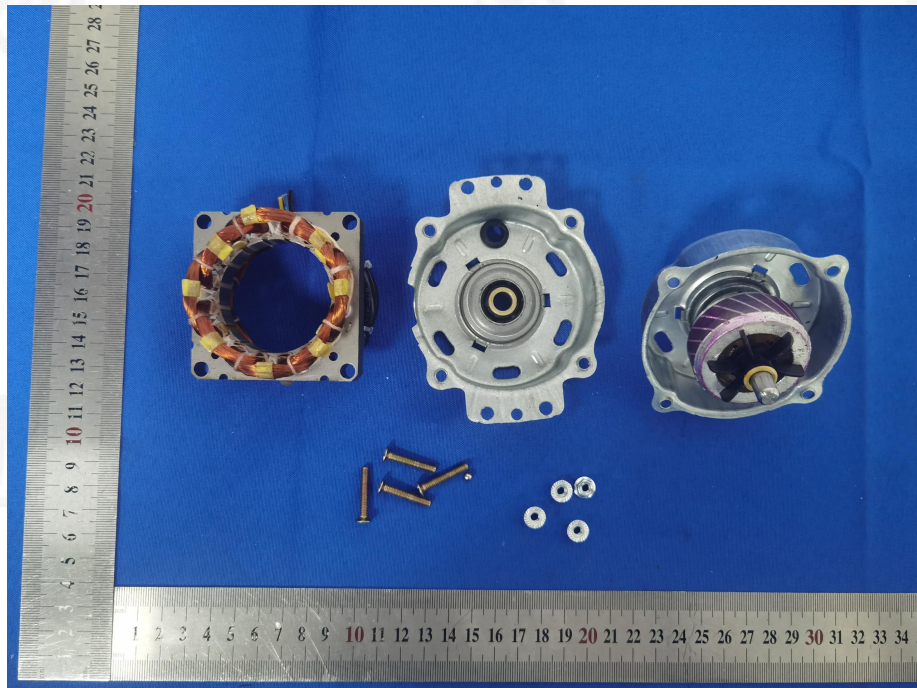


EUT Photo 10

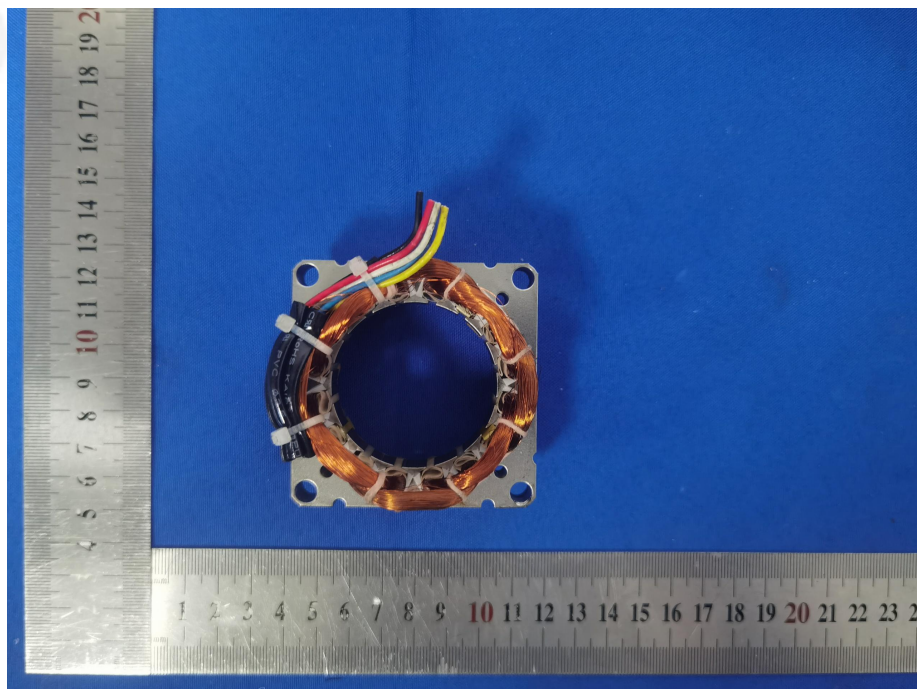




EUT Photo 11



EUT Photo 12



\*\*\*\*\* END OF REPORT\*\*\*\*\*