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Applicant: LINKCOM MANUFACTURING CO.,LTD

Address: Building 1,No.21 Huanqi Avenue,Qishi Town Dongguan Guangdong Sheng

China

The following sample was submitted and identified by/on behalf of the client as:

Sample Name: Car Charger
Model No.: OPP123
Client Reference OPP127

Information:

Sample Received Date: 2023.03.01

Testing Period: 2023.03.01—2023.03.06

Test Requested: As specified by client, Split the sample and determine the Pb, Cd, Hg, Cr(VI),

PBBs ,PBDEs, DBP, BBP, DEHP and DIBP content of the parts.

Test Method: 1. Sample Screening testing with reference to IEC 62321-3-1:2013

2. Chemical Test Method

a. Determination of Lead ,Cadmium by ICP-OES with reference to

IEC 62321-5:2013

b. Determination of Mercury by ICP-OES with reference to IEC

62321-4:2013+AMD1:2017

c. Determination of Hexavalent Chromium by Colorimetric method using

UV-Vis reference to IEC 62321-7-1:2015, IEC 62321-7-2:2017

d. Determination of PBBs and PBDEs by GC-MS with reference to IEC

62321-6:2015

e. Determination of DBP, BBP, DEHP and DIBP by GC-MS with reference

to IEC 62321-8:2017

Test Result(s): Please refer to the following page(s).

Conclusion: Base upon the performed tests by submitted sample, the test results comply

with the limits as set by Directive (EU) 2015/863 - Amendment of EU RoHS

Directive 2011/65/EU Annex II.

Checked by

Approved by

Justin

Ryan Zhang

Technical Manager



#### Test Result(s)

Part No.	Part Description	Restricted Substances	. (b)	esult of DXRF (1)	Result of Chemical Testing (2) (mg/kg)	Conclusion on RoHS
		Pb		BL		Comply
		Cd		BL		Comply
		Hg		BL		Comply
		Cr(VI)		BL		Comply
	Black plastic	PBBs		BL	(20)	Comply
•	Diack plastic	PBDEs		BL		Comply
		DBP		<del></del>	N.D.	Comply
	(0)	BBP		(0)	N.D.	Comply
		DEHP			N.D.	Comply
		DIBP	- Z\		N.D.	Comply
(C)	(0)	Pb	(0)	BL		Comply
		Cd		BL		Comply
		Hg		BL		Comply
		Cr(VI)		BL		Comply
0	Silvery color	PBBs				NA
2	metal with multi color coating	PBDEs				NA
		DBP			()	NA (
		BBP				NA
		DEHP				NA
	(3)	DIBP		(c)		NA
		Pb		BL		Comply
		Cd		BL		Comply
	(6)	Hg		BL	(	Comply
		Cr(VI)		BL		Comply
•	Bush to di	PBBs		BL		Comply
3	Black plastic	PBDEs		BL (		Comply
		DBP		80	N.D.	Comply
		BBP			N.D.	Comply
		DEHP			N.D.	Comply
		DIBP			N.D.	Comply



Part No.	Part Description	Restricted Substances	Result of EDXRF (1)	Result of Chemical Testing (2) (mg/kg)	Conclusion on RoHS	
	(0)	Pb	BL		Comply	
		Cd	BL		Comply	
		Hg	BL		Comply	
		Cr(VI)	BL	$(\underline{c})$	Comply	
	White	PBBs	BL		Comply	
4	translucent	PBDEs	BL		Comply	
	plastic	DBP	(6)	N.D.	Comply	
		BBP		N.D.	Comply	
		DEHP		N.D.	Comply	
		DIBP		N.D.	Comply	
		Pb	BL		Comply	
		Cd	BL		Comply	
	(3)	Hg	BL (C)		Comply	
		Cr(VI)	BL		Comply	
		PBBs	BL		Comply	
5	White cotton	PBDEs	BL	( <del>-c</del> 1)	Comply	
		DBP		N.D.	Comply	
		BBP		N.D.	Comply	
		DEHP	(5)	N.D.	Comply	
		DIBP		N.D.	Comply	
		Pb	BL		Comply	
		Cd	BL	(	Comply	
		Hg	BL		Comply	
		Cr(VI)	BL		Comply	
	White	PBBs	BL (		Comply	
6	translucent soft	PBDEs	BL		Comply	
	plastic	DBP		N.D.	Comply	
		BBP		N.D.	Comply	
	100	DEHP	S	N.D.	Comply	
		DIBP		N.D.	Comply	



Part No.	Part Description	Restricted Substances	Result of EDXRF (1)	Result of Chemical Testing (2) (mg/kg)	Conclusion on RoHS	
	(0)	Pb	BL		Comply	
		Cd	BL		Comply	
		Hg	BL		Comply	
		Cr(VI)	BL	( <u>c</u> )	Comply	
	Transparent	PBBs	BL		Comply	
7	plastic	PBDEs	BL		Comply	
	piastic	DBP	BL (S)	N.D.	Comply	
		BBP		N.D.	Comply	
		DEHP		N.D.	Comply	
		DIBP		N.D.	Comply	
		Pb	BL	N.D.	Comply	
		Cd	BL		Comply	
		Hg	BL		Comply	
		Cr(VI)	BL		Comply	
		PBBs	BL		Comply	
8	White cotton	PBDEs	BL			
		DBP	DL DL	N.D.	Comply	
					Comply	
		BBP DEHP		N.D.	Comply	
	(0)		(6)	N.D.	Comply	
		DIBP		N.D.	Comply	
		Pb	BL		Comply	
	(0)	Cd	BL	$(\overline{C})$	Comply	
		Hg	BL	2	Comply	
	AA/I Char Claras Land	Cr(VI)	BL		Comply	
9	White fiberglass	PBBs	BL		Comply	
	pipe	PBDEs	BL		Comply	
		DBP		N.D.	Comply	
		BBP		N.D.	Comply	
		DEHP		N.D.	Comply	
		DIBP		N.D.	Comply	



Part No.	Part Description	Restricted Substances		Result of EDXRF (1)	Result of Chemical Testing (2) (mg/kg)	Conclusion on RoHS	
	(6)	Pb		BL		Comply	
		Cd		BL		Comply	
		Hg		BL	<del></del> /-	Comply	
	(0)	Cr(VI)		BL	( <u>c</u> )	Comply	
	Silvery color	PBBs				NA	
10	metal	PBDEs		(,		NA	
	$\langle C \rangle$	DBP		KC)		NA	
		BBP				NA	
		DEHP				NA	
		DIBP			( <u>-c</u> )	NA C	
		Pb		BL		Comply	
		Cd		BL		Comply	
	(C)	Hg		BL		Comply	
		Cr(VI)		BL		Comply	
	White textile	PBBs		BL		Comply	
(11	fabric	PBDEs	(20)	BL	(-61)	Comply	
		DBP			N.D.	Comply	
		BBP			N.D.	Comply	
	(3)	DEHP		(,c)	N.D.	Comply	
		DIBP			N.D.	Comply	
		Pb		BL		Comply	
	(3)	Cd		BL	((1)	Comply	
		Hg		BL		Comply	
		Cr(VI)		BL		Comply	
10	Silvery color	PBBs		(5)		NA	
12	metal net	PBDEs				NA	
		DBP				NA	
		BBP				NA	
	100	DEHP	18	<i></i>	(2)	NA NA	
		DIBP				NA	



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Part No.	Part Description	Restricted Substances	Result of EDXRF (1)	Result of Chemical Testing (2) (mg/kg)	Conclusion on RoHS	
		(d)	(3)			
		Pb	BL		Comply	
		Cd	BL		Comply	
		Hg	BL		Comply	
		Cr(VI)	BL	(-2)	Comply	
13	Silvery color	PBBs			NA	
13	metal	PBDEs			NA	
	(0,)	DBP	(60)		NA NA	
		BBP			NA	
		DEHP		<u></u>	NA	
(6)	(0)	DIBP	(5)		NA	
		Pb	BL		Comply	
		Cd	BL		Comply	
	$\langle C \rangle$	Hg	BL		Comply	
		Cr(VI)	BL		Comply	
	Silvery color	PBBs			NA	
14	metal	PBDEs	(6)	(-6)	NA (	
		DBP			NA	
		BBP			NA	
		DEHP	(5)		NA NA	
		DIBP			NA	
		Pb	BL		Comply	
		Cd	BL		Comply	
		Hg	BL		Comply	
		Cr(VI)	BL		Comply	
		PBBs	BL		Comply	
15	Black plastic	PBDEs	BL	) 	Comply	
		DBP		N.D.	Comply	
	(A)	BBP		N.D.	Comply	
	((C))	DEHP	(0)	N.D.	Comply	
		DIBP		N.D.	Comply	
		טוסר		IN.D.	Comply	



Part No.	Part Description	Restricted Substances	(L(G))	esult of DXRF (1)	Result of Chemical Testing (2) (mg/kg)	Conclusion on RoHS	
		Pb		BL	<del></del>	Comply	
		Cd		BL		Comply	
		Hg		BL	,	Comply	
		Cr(VI)	$\langle c \rangle$	BL	( <u>c</u> )	Comply	
		PBBs		BL		Comply	
16	White plastic	PBDEs		BL		Comply	
		DBP		(0)	N.D.	Comply	
		BBP			N.D.	Comply	
		DEHP			N.D.	Comply	
		DIBP			N.D.	Comply	
		Pb		BL		Comply	
		Cd		BL		Comply	
	(5)	Hg		BL C	)	Comply	
		Cr(VI)		BL		Comply	
	White textile	PBBs		BL		Comply	
17	fabric	PBDEs		BL	( <del>-c</del> )	Comply	
		DBP			N.D.	Comply	
		BBP			N.D.	Comply	
		DEHP		(.G	N.D.	Comply	
		DIBP			N.D.	Comply	
		Pb		BL		Comply	
		Cd		BL	(	Comply	
		Hg		BL		Comply	
		Cr(VI)		BL		Comply	
40	Dod plantic tops	PBBs		BL		Comply	
18	Red plastic tape	PBDEs		BL		Comply	
		DBP			N.D.	Comply	
		BBP			N.D.	Comply	
	100	DEHP			N.D.	Comply	
		DIBP			N.D.	Comply	



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Part No.	Part Description	Restricted Substances	Result of EDXRF (1)	Result of Chemical Testing (2) (mg/kg)	Conclusion on RoHS
	(0)	Pb	BL		Comply
		Cd	BL		Comply
		Hg	BL		Comply
		Cr(VI)	BL	$(\underline{c})$	Comply
	Yellow	PBBs	BL		Comply
19	transparent	PBDEs	BL		Comply
	plastic tape	DBP	(6)	N.D.	Comply
		BBP		N.D.	Comply
		DEHP		N.D.	Comply
		DIBP		N.D.	Comply
		Pb	BL		Comply
		Cd	BL		Comply
	(6)	Hg	BL C		Comply
		Cr(VI)	BL		Comply
	Black plastic	PBBs	BL		Comply
20	tape	PBDEs	BL	( <del>-6</del> 1)	Comply
		DBP		N.D.	Comply
		BBP		N.D.	Comply
		DEHP	(5)	N.D.	Comply
		DIBP		N.D.	Comply
		Pb	BL		Comply
		Cd	BL	(	Comply
		Hg	BL		Comply
		Cr(VI)	BL		Comply
		PBBs	BL (S)		Comply
21	Red paper	PBDEs	BL		Comply
		DBP		N.D.	Comply
		ВВР		N.D.	Comply
		DEHP		N.D.	Comply
		DIBP		N.D.	Comply



Part No.	Part Description	Restricted Substances	Result of EDXRF (1)	Result of Chemical Testing (2) (mg/kg)	Conclusion on RoHS
		Pb	BL		Comply
		Cd	BL		Comply
		Hg	BL		Comply
(60.)	(0)	Cr(VI)	BL	$(\underline{c})$	Comply
22	Croon paper	PBBs	BL		Comply
	Green paper	PBDEs	BL		Comply
		DBP	(C)	N.D.	Comply
		BBP		N.D.	Comply
		DEHP		N.D.	Comply
$(C_{\mathcal{C}})$		DIBP	<u>()</u>	N.D.	Comply
		Pb	BL		Comply
		Cd	BL		Comply
	$(C_{i})$	Hg	BL		Comply
		Cr(VI)	BL		Comply
23	Solder	PBBs			NA
( )	Solder	PBDEs	<u>()</u>	( <del>-c</del> )	NA (
		DBP			NA
		BBP			NA
	(6)	DEHP	(c <sup>2</sup>	)	NA NA
		DIBP			NA





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#### Remark:

(1) (a) It is the result on total Br while test item on restricted substances is PBBs/PBDEs. It is the result on total Cr while test item on restricted substances is Cr(VI).

(b) Results are obtained by EDXRF for primary screening, and further chemical testing by ICP-OES (for Cd, Pb, Hg), UV-Vis (for Cr(VI)) and GC/MS (for PBBs, PBDEs) is recommended to be performed, if the concentration exceeds the below warning value according to IEC 62321-3-1:2013 (unit: mg/kg)

Element	Polymer	Metal	Composite Materials
0.4	BL≤(70-3σ) <x<< td=""><td>BL≤(70-3σ)<x<< td=""><td>LOD<x<(150+3σ)< td=""></x<(150+3σ)<></td></x<<></td></x<<>	BL≤(70-3σ) <x<< td=""><td>LOD<x<(150+3σ)< td=""></x<(150+3σ)<></td></x<<>	LOD <x<(150+3σ)< td=""></x<(150+3σ)<>
Cd	(130+3σ)≤OL	(130+3σ) ≤OL	≤OL
N DI	BL≤(700-3σ) <x<< td=""><td>BL≤(700-3σ)<x<< td=""><td>BL≤(500-3σ)<x<< td=""></x<<></td></x<<></td></x<<>	BL≤(700-3σ) <x<< td=""><td>BL≤(500-3σ)<x<< td=""></x<<></td></x<<>	BL≤(500-3σ) <x<< td=""></x<<>
Pb	(1300+3σ) ≤OL	(1300+3σ) ≤OL	(1500+3σ) ≤OL
l la	BL≤(700-3σ) <x<< td=""><td>BL≤(700-3σ)<x<< td=""><td>BL≤(500-3σ)<x<< td=""></x<<></td></x<<></td></x<<>	BL≤(700-3σ) <x<< td=""><td>BL≤(500-3σ)<x<< td=""></x<<></td></x<<>	BL≤(500-3σ) <x<< td=""></x<<>
Hg	(1300+3σ)≤OL	(1300+3σ)≤OL	(1500+3σ) ≤OL
Br	BL≤(300-3σ) <x< td=""><td>NA</td><td>BL≤(250-3σ)<x< td=""></x<></td></x<>	NA	BL≤(250-3σ) <x< td=""></x<>
Cr	BL≤(700-3σ) <x< td=""><td>BL≤(700-3σ)<x< td=""><td>BL≤(500-3σ)<x< td=""></x<></td></x<></td></x<>	BL≤(700-3σ) <x< td=""><td>BL≤(500-3σ)<x< td=""></x<></td></x<>	BL≤(500-3σ) <x< td=""></x<>

- (c) BL = Below Limit, OL = Over Limit, IN = Inconclusive, LOD = Limit of Detection,
  - --- = Not Regulated, NA = Not Applicable.
- (d) The XRF screening test for RoHS elements The reading may be different to the actual content in the sample be of non-uniformity composition.
- (2) (a) 1mg/kg = 1ppm = 0.0001%, N.D.= Not Detected (<MDL), --- = Not Conducted.
  - (b) Unit and Method Detection Limit (MDL) in chemical test

Test Items	Pb	Cd	Hg	Cr(VI)	PBBs	PBDEs	DBP	BBP	DEHP	DIBP
MDL(mg/kg)	10	10	10	*	100	100	100	100	100	100
Limit(mg/kg)	1000	100	1000	1000	1000	1000	1000	1000	1000	1000

<sup>\*</sup>MDL of Cr(VI) for polymer, composite sample is 10 mg/kg,

MDL of Cr(VI) for metal sample is 0.10 µg/cm<sup>2</sup>,

The limit is quoted from the Directive (EU) 2015/863 - Amendment of EU RoHS Directive 2011/65/EU Annex II.

- (c) According to IEC 62321-7-1:2015, For metal samples,
  - a. When the Cr (VI) concentration is > the 0,13  $\mu$ g/cm<sup>2</sup>, the sample is positive for Cr(VI) and considered to contain Cr(VI).
  - b. When the Cr (VI) concentration is N.D.(< the 0,10  $\mu$ g/cm<sup>2</sup>), the sample is negative for Cr(VI) and considered a non-Cr(VI) based coating.
  - c. When the Cr (VI) concentration is  $\geq$  the 0,10 µg/cm<sup>2</sup> and  $\leq$  the 0,13 µg/cm<sup>2</sup>, the result is considered to be inconclusive Unavoidable coating variations may influence the determination.

Because the storage condition and production date of the sample are not known, the test results of



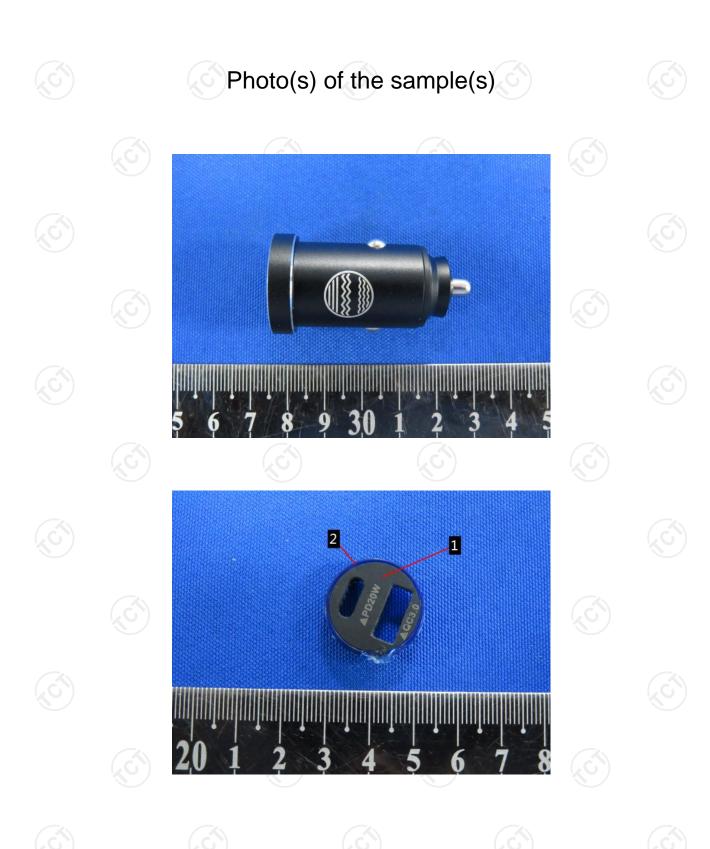
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the sample of hexavalent chromium can only represent the state of hexavalent chromium in the samples tested.



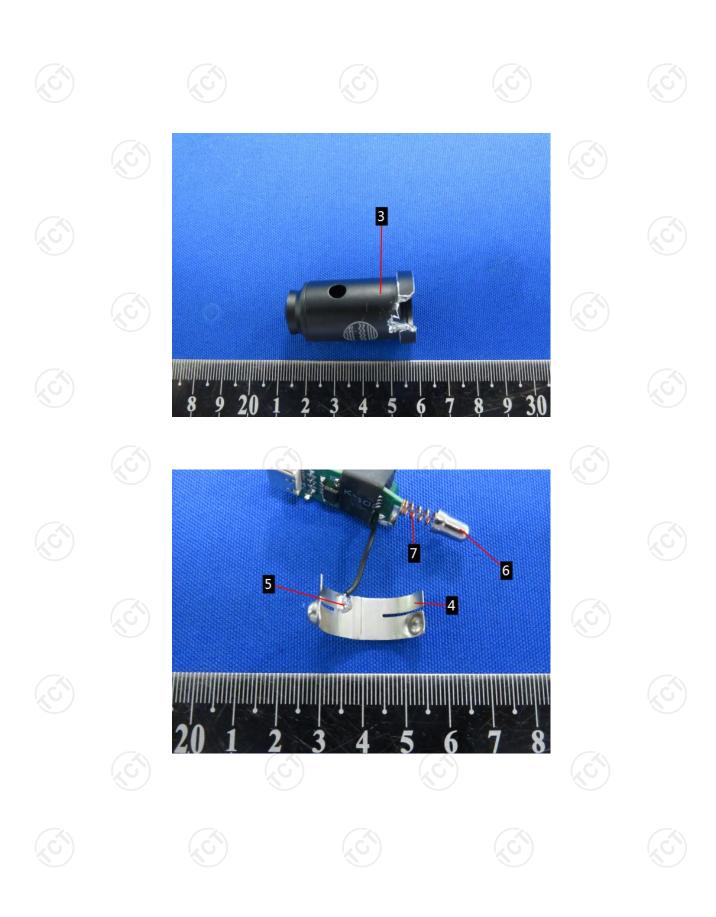


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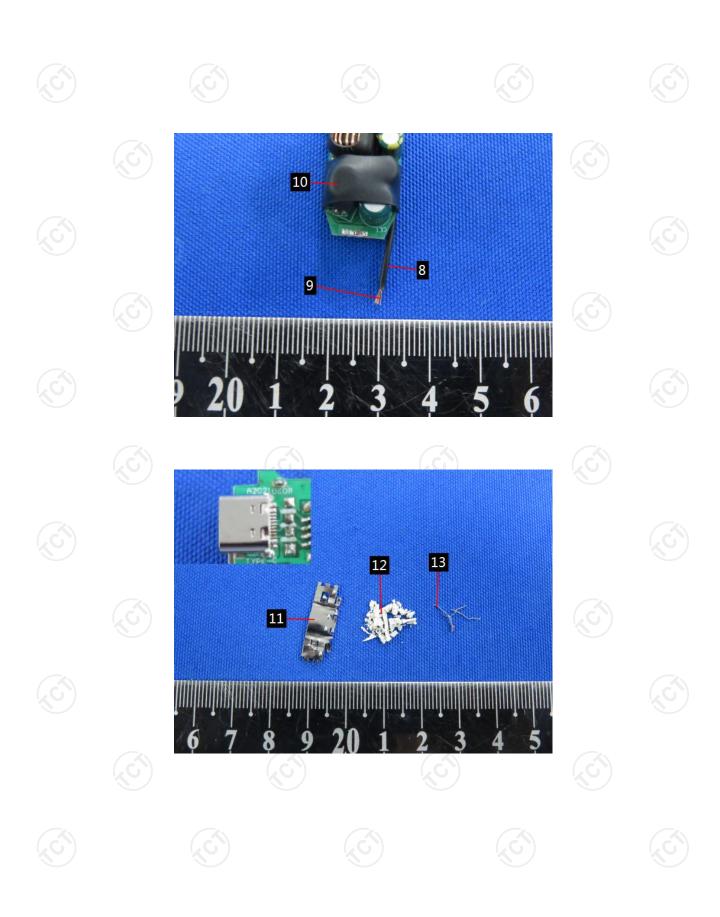


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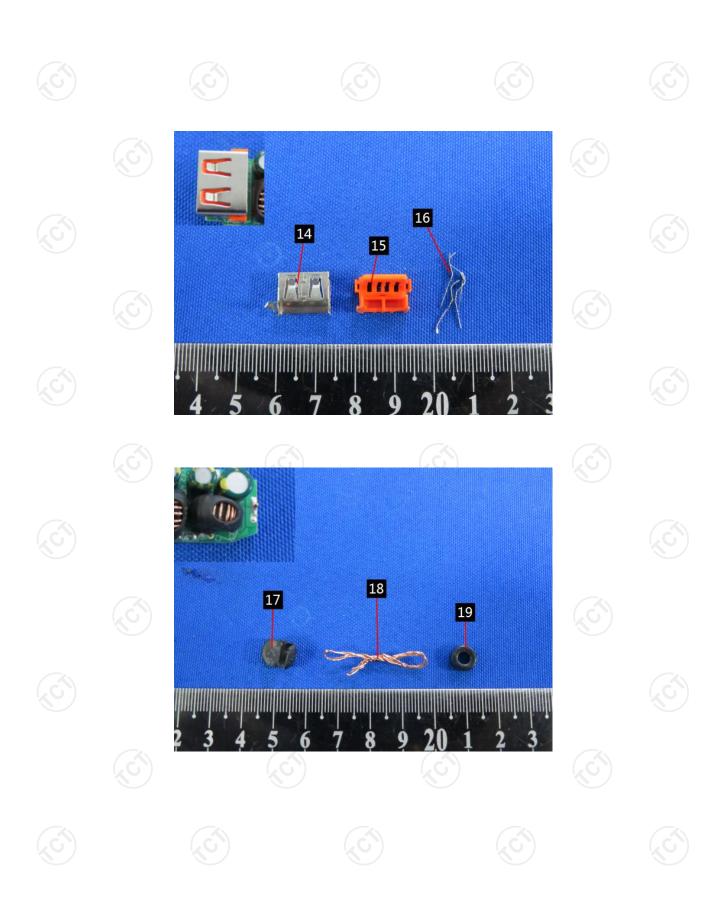


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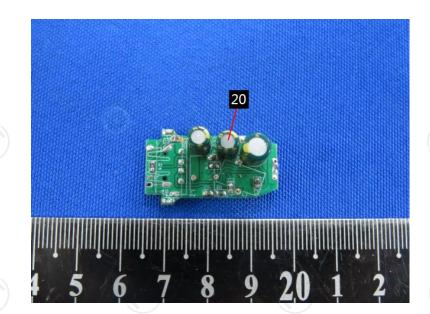


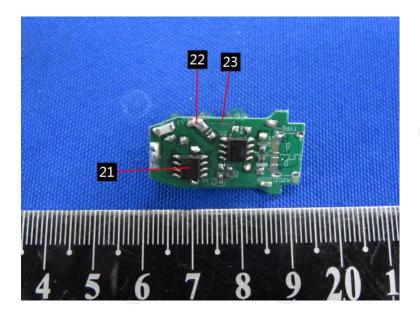
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\*\*\* End of Report \*\*\*

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