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Applicant : Shenzhen Best Promotion Ltd

Address : Room3003, Chuangxingda Business Building, Liuxian 3rd Road,

Bao'an 72th district, Shenzhen

The submitted sample and sample information was/were submitted and identified by/on the behalf

of the client

Sample name : Bracelet charging cable

**Export to** : Europe

Sample received date : Jul. 17, 2017

**Testing period** : Jul. 17, 2017 to Jul. 28, 2017

Test requested : 1. As specified by client, to screen Lead(Pb), Cadmium(Cd),

Mercury(Hg), Chromium(Cr) and Bromine(Br) in the submitted

sample(s) by XRF.

2. As specified by client, when screening results exceed the XRF screening limit in IEC 62321-3-1:2013, further use of chemical methods are required to test the Lead(Pb), Cadmium(Cd), Mercury(Hg), Hexavalent Chromium(Cr(VI)), Polybrominated Biphenyls(PBBs), Polybrominated Diphenyl Ethers(PBDEs) in the

submitted samples.

According to the RoHS Directive 2011/65/EU

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

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

Tested by Willow Line
Willow Line

Test engineer

Reviewed by Sahen Chen

Sahen Chen Laboratory manager Leo Li

Laboratory director

Address: East of 4/F, Building A, Hourui No.3 Industrial Zone, Xixiang Street, Bao'an District,



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## **Test Method:**

## A. Screening test by XRF spectroscopy

XRF screening limits in mg/kg for regulated elements according to IEC 62321-3-1:2013.

Element	Limit of IEC 62321-3	MDL		
	Polymers and metals	Composite material	Polymers	Other material
Pb	BL≤(700-3σ) <x <(1300+3σ)<br="">≤OL</x>	BL≤(500-3σ) <x <(1500+3σ)<br="">≤OL</x>	10 mg/kg	50 mg/kg
Cd	BL≤(70-3σ) <x <(130+3σ)<br="">≤OL</x>	LOD≤(50-3σ) <x <(150+3σ)<br="">≤OL</x>	10 mg/kg	50 mg/kg
Hg	BL≤(700-3σ) <x <(1300+3σ)<br="">≤OL</x>	BL≤(500-3σ) <x <(1500+3σ)<br="">≤OL</x>	10 mg/kg	50 mg/kg
Cr	BL≤(700-3σ)< X	BL≤(500-3σ)< X	10 mg/kg	50 mg/kg
Br	BL≤(300-3σ)< X	BL≤(250-3σ)< X	10 mg/kg	50 mg/kg

## Note:

- -BL = Under the XRF screening limit
- -OL = Further chemical test will be conducted while result is above the screening limit
- -X= The symbol "X" marks the region where further investigation is necessary
- -3σ= The reproducibility of analytical instruments
- -LOD= Detection limit

## **B. Chemical Test**

Test Item(s)	Test Method	Measured Equipment(s)	MDL	Limit
Lead (Pb)	IEC 62321-5:2013 Ed.1.0	ICP-OES	2 mg/kg	1000 mg/kg
Cadmium (Cd)	IEC 62321-5:2013 Ed.1.0	ICP-OES	2 mg/kg	100 mg/kg
Mercury (Hg)	IEC 62321-4:2013 Ed.1.0	ICP-OES	2 mg/kg	1000 mg/kg
Lleveralent Chromitum Cr(\/I\)	IEC 62321-7-1:2015 Ed.1.0	UV-VIS	Potek	1000 mg/kg
Hexavalent Chromium Cr(VI)	IEC 62321-7-2:2017 Ed.1.0	UV-VIS	2 mg/kg	1000 mg/kg
Polybrominated Biphenyls (PBBs)	IEC 62321-6:2015 Ed.1.0	GC-MS	5 mg/kg	1000 mg/kg
Polybrominated Diphenyl Ethers (PBDEs)	IEC 62321-6:2015 Ed.1.0	GC-MS	5 mg/kg	1000 mg/kg





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## **Test Results:**

Sample No.	Sample Description	Tested Items	XRF Screening Test Unit (mg/kg)	Chemical Test Unit (mg/kg)	Conclusion
por Kingh	VII.	Pb	hotek BLbote	Aug Tell	ick Vupo,
	Vup.	Cd	atek BL nooten	And Ik	hotek Ant
10tek	Silvery metal	Hg no ot o	And sevBL spokek	Vupol K	PASS
	k Aupore	Cr(Cr(VI))	And X	Negative	Anbo
	otek Aupoter	Br(PBBs&PBDEs)	Aupo, I Will	otek Inboten	Aupo
V.	otek vupotek	Pb	Lek ANBLE AN	ek / Spotek	Aupor
	Disak is alsot	Kn Cd	BLooke I	100 PK 1 100	ek Anbore
2	Black jacket tube	Hg Hg	BL botek	Aupor / Au	PASS
	rupe ha	Cr(Cr(VI))	Aupo BL BL Motek	Work Yu	sek by
	Aupoter	Br(PBBs&PBDEs)	Anbor BL An	r Wash	Aupo, ok
Vue	tek Upotek	Pb Pb	Anbor BL Ano	rek Lootek	Aupolo
	Black plastic	And Cd	ek NBL And	y I work	Aupoier
3		Hg And	BLorek A	Posts I Will	PASS
		Cr(Cr(VI))	BL BL	Vupose, 1 Vup.	
	Aupotek Vup	Br(PBBs&PBDEs)	Aupor BL	nbotek Anb	Or VIII
Yun	10010K	Pb	Whose BT Wype	1 lok	upolo Pi
	ek botek	Kupo, Cd bus	nooteBL Ando	K Lotek	Anboiek
4 1000	Black plastic	Anbote Hg Anbo	BL Anbo	All sok	PASS
	Pup Yup	Cr(Cr(VI))	BL	ooter / Aug	. bolek
	upotek Aupot	Br(PBBs&PBDEs)	BL	Sporek / Mupo	-k Pur
*ek	abotek Anbo	Pb	Note BLub	potek Mype	V.
	Coppery metal	Cd	Whose BT Mupo.	No Jok	potek Ani
5		Anbote Hgant	bote BL Moore	Pur I sek	PASS
		Cr(Cr(VI))	BL Anboi	P.D.	A. botek
, no	otek Anbo	Br(PBBs&PBDEs)	Vun Liek	ofer Mupo.	Yuz
tek	"potek Vupo,	Pb	A BL	potek / Aupore	Vun
6	Black plastic cover	Cd	BL'octer	" Pupo,	er Aupo
		Hg	BL Anbore	And other	PASS
		Cr(Cr(VI))	ATT OF OF BL NOOF OF	Aug 1 PSK	botek A
	Vupo,	Br(PBBs&PBDEs)	BL bote	KUY	Yu.



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Sample No.	Sample Description	Tested Items	XRF Screening Test Unit (mg/kg)	Chemical Test Unit (mg/kg)	Conclusion
" o'k	Posek Vupose	Pb	otek BL	Lotek / Anbote	VUDO
	Cilvanunastal	Cd	hotek BL/bore	Yun Tel	tek Vupor
7	Silvery metal	Hg	Rek BL Mootes	And Lak	PASS
	plate	Cr(Cr(VI))	And tekBL shotek	Vupo, V	o sex
	k Aupore	Br(PBBs&PBDEs)	Augo. It hos	N Doro	Yup.
K 1/2	otek Vupote	Pb	Ano BL An	otek Inboter	Vup.
	otek Anbotek	Cd	LOK ANBL ANY	tek   Spotek	Aupore
8	White plastic	Hg	stek BLootek	74/20 POS	PASS
	Aupor All	Cr(Cr(VI))	BL botek	Aupor /	stek Mp
	Vupose Vu	Br(PBBs&PBDEs)	Aupo PR Br Posek	Aupor Au	sek k
rote,	· Aupore	rek Pb botek	Anbor BL And	e When	Aupo. ok
	Beige gummed	And Cd	AnborBL And	sek Lobotek	Anbore
9 100		Anbot Hg	ek MBL And	J Lotok	PASS
tek Wipote	tape	Cr(Cr(VI))	BLorek A	Upor I Am	k hotel
	Anbore And	Br(PBBs&PBDEs)	BL orek	Anbore / Anb	*6/
"oiek	Aupote, Vur	Pb otek	Anbot BL Rek	Anbotek Anb	) K
	, notek	Cd	Anbore BL Anb	ob Nok	upore Ar
10	Golden wire	Hg Hg	Napote BL Ando	1 Notek	PASS
	All hotek	Cr(Cr(VI))	BL Ando	All Stek	, upotek
	ote, Yun	Br(PBBs&PBDEs)	Totok W.	oose / And	, spotek
otek	TUPOSE, YUB	Pb	BL ROY	Anbotek / Anbo	or hot
	" "potek Vupc	Cd	Noote Brus	potek Aupo	V. Vun
11 ×	Green wire	Hg	Model BL Ande	W. Molek	PASS
	k Pu.	Cr(Cr(VI))	pote BL Moot	Aug 1 stek	· upotek
Aupore	Yun Gok	Br(PBBs&PBDEs)	K Post Vupos	My Pak	h. botek
Anb	ore. Mung	Pb Anbox	BL	Pupo.	b
	Upotek Vupor	Cd	P.BL	abotek / Anbota	V VV
12	Blue wire	Hg	BL'	"Otek   Vupo,	PASS
	Yu.	Cr(Cr(VI))	potek BLAnbore	Alla Str	otek Aup
	YUD - OK	Br(PBBs&PBDEs)	An Tek I "upoter	Anbal A	"otek



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VII.	101	VUDO. N.	hote. And	, ek	200,
Sample No.	Sample Description	Tested Items	XRF Screening Test Unit (mg/kg)	Chemical Test Unit (mg/kg)	Conclusion
- ek	potek Aupore	Pb	BL	Lotek / Anbote	VUDO
oto	Yun Vick Vupe	Cd	hotek BL/pore	Ans do	tek Yupo,
13	Red wire	Hg	atek BL nooten	AUD I'M	PASS
rupojek	VUDO, V	Cr(Cr(VI))	PUL POLOK	Vupol K	in otok
Pote	k Aupore	Br(PBBs&PBDEs)	Vupo. It hos	N Note	Aupariek
F	otek Anbore	Pb bot	N <sub>0</sub> BL	stek Inbosen	Vup.
VU	otek Anbotek	Cd	LOD	tek 1 spotek	Auporc
14	IC NO	he Hg	atek BLooker	rupe IN POLICE	PASS
botek	Aupor All	Cr(Cr(VI))	BL BL	Aupor 1 Au	otek no
· Votek	Vupose. Vu	Br(PBBs&PBDEs)	Mupo X X Motok	N.D.	oc k.
Y. Pore	VUpose.	Pb hotek	BL And Act	e Valen	Aupo ok
AUD	tek hotek	Cd Cd	LOD AND	Lootek Lootek	Anbore
15 Anbi	Chip capacitor	<sub>A</sub> n <sup>b</sup> o™ Hg	BL And	J Lotek	PASS
ek b	por Vu	Cr(Cr(VI))	BLove <sup>k</sup>	Upota I Alia	k hotel
ootek	Aupore. Aup	Br(PBBs&PBDEs)	BL	Vupose 1 Vup	* 6 P
"Otek	Vupose, Vup	Pb otek	BL Tek	upote And	D. K.
Vup. Jek	"potek	Cd	FUPOLE FOD FUE	o Lex	upore A
16	Chip resistor	Hg Hg	BL MOO	T Totak	PASS
Aupo,	V PIII	Cr(Cr(VI))	BL MOO	All Sok	, upotek
K An	ore, Yun	Br(PBBs&PBDEs)	BL	ooses 1 Pup	. hotek
Ver	VUPOSS, VUP	Pb N	BL	nbotek / Anbo	ek ko
*ek	Obotek Anbo	Cd	nbote BL	Pupe Yupe	re. And
17	Silvery metal	Hg	BL Model	No lok	PASS
Aupor	shell	Cr(Cr(VI))	BL Moo	V V I rok	nbotek
Aupore	Vup. Stek	Br(PBBs&PBDEs)	W Mark Mapos	AN	P. Potek
- 600	oten Ande	Pb Anbox	BL	Ofek Pupo	Vi.
rek.	Coppery metal pin	Cd	PBL N	botek / Aupore	VUD.
18		Hg	botek Br	" " Woot	PASS
nbois		Cr(Cr(VI))	botek BL Anbore	Ame Ik	otek Anb
Vuposer	VUD.	Br(PBBs&PBDEs)	And Stok I Upotok	Anbolok	Lotek b





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Sample No.	Sample Description	Tested Items	XRF Screening Test Unit (mg/kg)	Chemical Test Unit (mg/kg)	Conclusion
Potek Wupote	Pb	BL	Lotek / Aubore	VUDO	
o <sup>cc</sup>	VA (la ita iran a mana)	Cd	hotek BL/por	Yun Tol	rek Vupor
19	White inner	Hg	ntek BL mbotes	And I k	PASS
Vupotek	plastic	Cr(Cr(VI))	BL botek	Vupo, V	, otek
obot!	K Aupore	Br(PBBs&PBDEs)	BL	A Polo	YUD JOK
K	otek Anbore	Pb	Mup BL Mu	otek Inboter	Vup.
K Vu.	Lotek Anbotek	Cd	LOK MOBLE AND	tek / Społek	Vupor.
20	Soldering tin	Hg	BLooker BL	74/ PO.	PASS
potek	Aupo, V.	Cr(Cr(VI))	BL BL	Aupor / Au	stek Mp
botek	Aupore Au	Br(PBBs&PBDEs)	YUDO IN I WOSEK	Aupor Au	*e*
rote!	. Aupore	ek Pb botek	BL BL	e Wash	Yupo K
And	tek upotek	Cd Cd	LOD	Lotek Lootek	Anbore
21	PCB	Hg Hg	BL	J Kotek	PASS
'ek b	por All	Cr(Cr(VI))	BL	por I Am	k vooisk
botek	Anbore Ans	Br(PBBs&PBDEs)	X	N.D.	* 6/ 7/0°
hotek	Aupote, Vur	Pb of Pb	Aupor BL Rek	Ant Patodo	,
Vun	Silvery metal	Cd	BL And	ob Kek	upore V
22		Hg Hg	BL And	ok I notek	PASS
Aupo		Cr(Cr(VI))	X Andro	Negative	Vupotek.
K PU		Br(PBBs&PBDEs)	Totak Mu	pote. / And	botek
otek	White jacket	Pb N	BL	Aupotek / Aupo	CK NOT
1ek		Cd	nbore BL tek	spotek Aupo	V Ans
23		Hg	Aupoten BL Aupo	W. Molek	PASS
Aupor	tube	Cr(Cr(VI))	pote BL Anbor	Y AME I STOK	Motek
Aupore.	V Vyp	Br(PBBs&PBDEs)	BL Anbos	MA	botek
Anb	Ver Yupa	Pb Anbor	BL	Pupo.	b. notek
24	White plastic shell	Cd	BL	abotek / Anbot	Y VI
		Hg	BL BL	" Potek   Vupo,	PASS
100°		Cr(Cr(VI))	borek BL Moor	VIII.	otek Yup
Aupoter		Br(PBBs&PBDEs)	BL Moore	And I ak	wotek A



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Sample No.	Sample Description	Tested Items	XRF Screening Test Unit (mg/kg)	Chemical Test Unit (mg/kg)	Conclusion
25	White plastic cover	Pb	BL	otek / Anbore	Augs
		Cd	BL bore	Yun Fel Vap.	tek Vupor
		Hg	gek BL Moore	And Lok	PASS
		Cr(Cr(VI))	And sell solver	Vupo, V	otek.
		Br(PBBs&PBDEs)	And BL Not	N Voice	Vup.

#### Note:

- -MDL = Method Detection Limit
- -N.D. = Not Detected (<MDL)
- -mg/kg = ppm = parts per million
- -Negative = Absence of Cr(VI), the detected Cr(VI) concentration in the boiling water extraction solution is less than 0.10ug/cm<sup>2</sup>.
- -Positive = Presence of Cr(VI), the detected Cr(VI) concentration in the boiling water extraction solution is equal to or greater than 0.13ug/cm<sup>2</sup>.

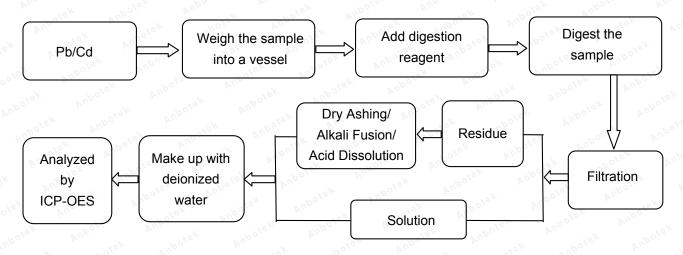
#### Remark:

- The screening results are only used for reference.
- When conducting the test for PBBs&PBDEs, XRF was introduced to screen Br Exclusively; When conducting the test for Hexavalent Chromium, XRF was introduced to screen Chromium exclusively.

#### **Test Process:**

The sample(s) had been dissolved totally tested for Lead, Cadmium, Mercury.

#### IEC 62321-5:2013 Ed.1.0

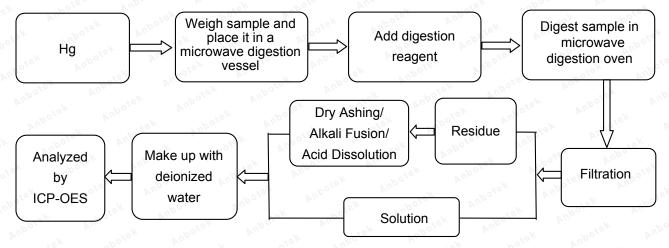




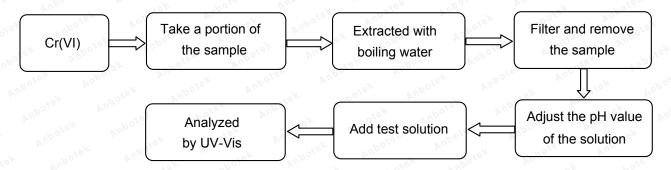


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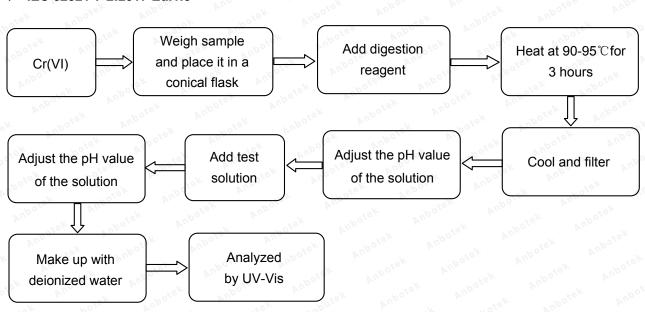
## ♦ IEC 62321-4:2013 Ed.1.0



#### ♦ IEC 62321-7-1:2015 Ed.1.0



#### ♦ IEC 62321-7-2:2017 Ed.1.0

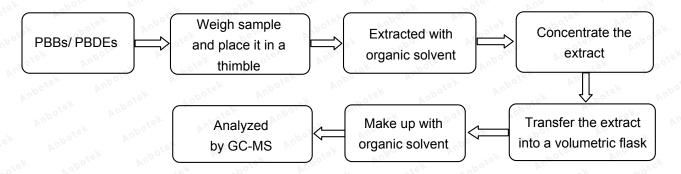






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## IEC 62321-6:2015 Ed.1.0



## **Photograph of Sample**



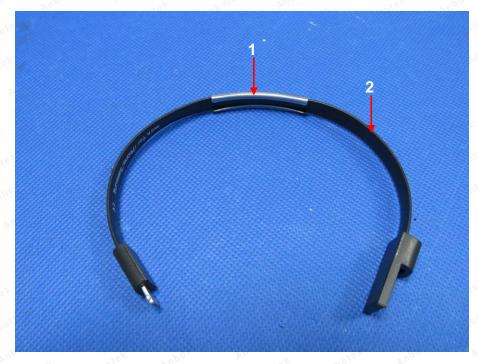


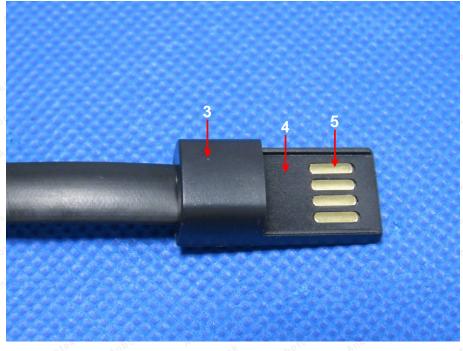
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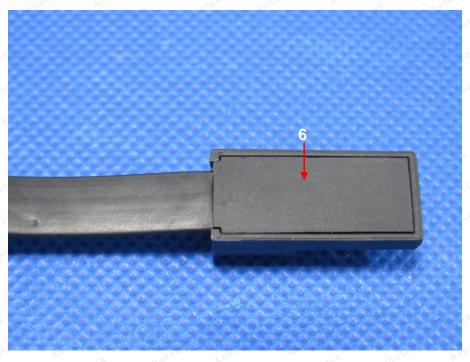
## Photo(s) of the tested component(s)

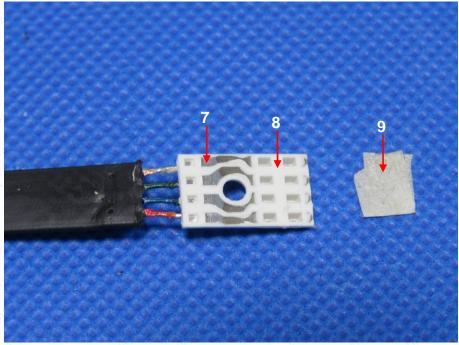






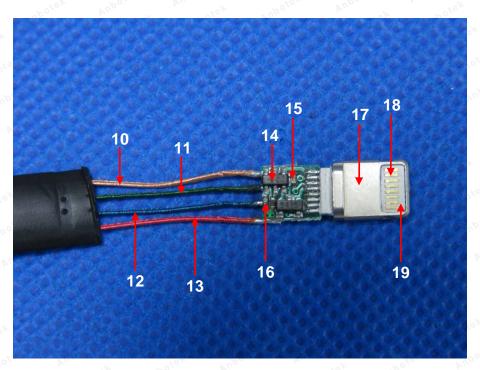
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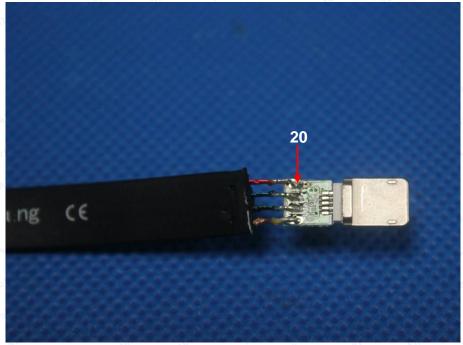






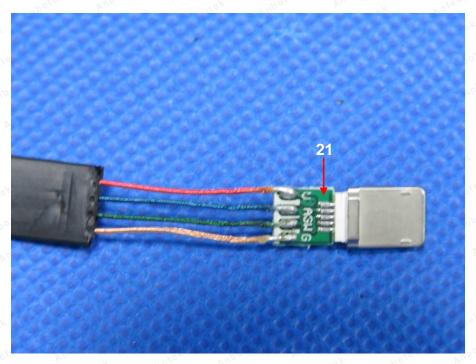
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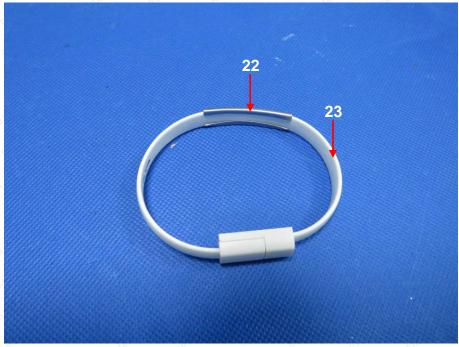






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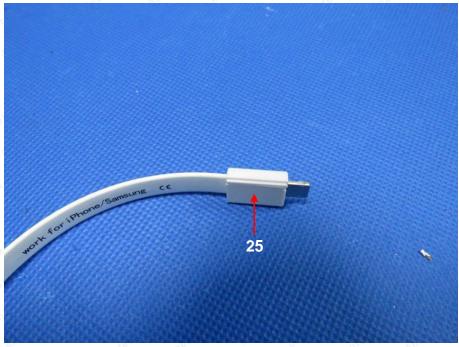






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\*\*\*\*\* End of Report \*\*\*\*\*

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