



中国认可  
国际互认  
检测  
TESTING  
CNAS L6478



# TEST REPORT

**Report No.** ..... : WTF26F03073102C  
**Job No.** ..... : FSW2603201178CJ  
**Applicant** ..... : Mid Ocean Brands B.V.  
**Address** ..... : Unit 711-716, 7/F., Tower A, 83 King Lam Street, Cheung Sha Wan, Kowloon, Hong Kong.  
**Manufacturer** ..... : 119810  
**Sample Name** ..... : Smart device finder  
**Sample Model** ..... : MO3107, MO3108  
**Test Requested** ..... : With reference to EU RoHS Directive 2011/65/EU and its amendment Directive EU 2015/863, to determine the Pb, Cd, Hg, Cr<sup>6+</sup>, PBBs, PBDEs, DBP, BBP, DEHP, DIBP content in the submitted sample.  
**Test Method** ..... : Refer to next page (s)  
**Test Conclusion** ..... : **Pass**  
**Date of Receipt Sample** ..... : 2026-03-20  
**Testing Period** ..... : 2026-03-20 to 2026-04-01  
**Date of Issue** ..... : 2026-04-01  
**Test Result** ..... : Refer to next page (s)

**Prepared By:**

**Waltek Testing Group (Foshan) Co., Ltd.**

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Signed for and on behalf of  
Waltek Testing Group (Foshan) Co., Ltd.



WTF26F03073102C

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Sample photo:



MO3107



MO3107



MO3107



MO3107



MO3108

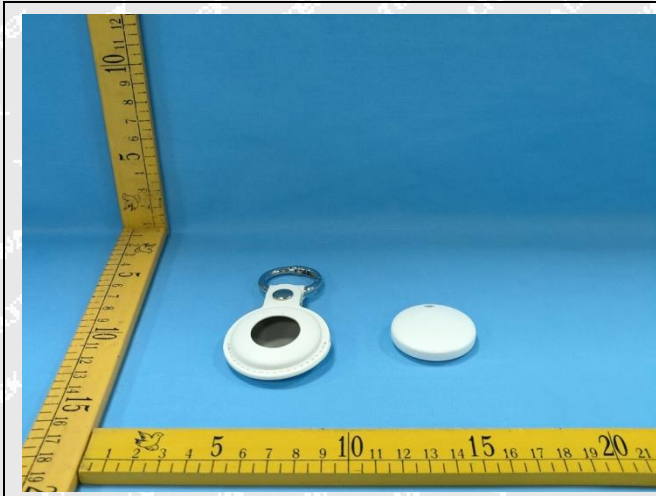


MO3108

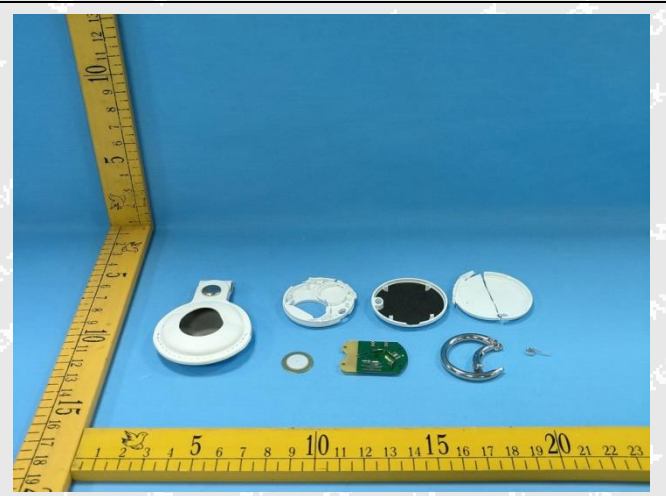


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**MO3108**



**MO3108**

# WALTEK

**Test Results:****1. Lead, Cadmium, Mercury, Hexavalent Chromium, PBBs and PBDEs**

Test Method/Equipment:

- 1) Disassembly, disjunction and mechanical sample preparation
- 2) With reference to IEC 62321-3-1:2013, screening –Lead, mercury, cadmium, total chromium and total bromine by X-ray fluorescence spectrometry
- 3) With reference to IEC 62321-4:2013+AMD1:2017 CSV, determination of Mercury by ICP-OES
- 4) With reference to IEC 62321-5:2013, determination of Lead and Cadmium by ICP-OES
- 5) With reference to IEC 62321-7-2: 2017 and IEC 62321-7-1: 2015, determination of Hexavalent Chromium by UV-Vis
- 6) With reference to IEC 62321-12:2023, determination of PBBs and PBDEs by GC-MS

Part No.	Part Description	Result of XRF					Result of Wet Chemical Testing (mg/kg)
		Cd	Pb	Hg	Cr	Br	
1	Silvery metal buckle	BL	BL	BL	BL	--	NA
2	Silvery metal rivet	BL	BL	BL	BL	--	NA
3	Silvery metal spring	BL	BL	BL	IN	--	Cr <sup>6+</sup> : Negative
4	Dark silvery metal ring	BL	BL	BL	BL	--	NA
5	Black synthetic leather	BL	BL	BL	BL	BL	NA
6	Silvery metal buckle	BL	BL	BL	BL	--	NA
7	Silvery metal strip	BL	BL	BL	BL	--	NA
8	Black fabric wire jacket	BL	BL	BL	BL	BL	NA
9	Multicolour fabric wire covering	BL	BL	BL	BL	BL	NA
10	Black plastic shell	BL	BL	BL	BL	IN	PBBs : ND PBDEs : 55
11	Black fabric wire covering	BL	BL	BL	BL	BL	NA
12	Black plastic shell	BL	BL	BL	BL	BL	NA
13	Black sponge with adhesive	BL	BL	BL	BL	BL	NA



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Part No.	Part Description	Result of XRF					Result of Wet Chemical Testing (mg/kg)
		Cd	Pb	Hg	Cr	Br	
14	White ceramic	BL	OL	BL	BL	BL	*Pb : 451951
15	Golden metal sheet	BL	BL	BL	BL	--	NA
16	Green PCB	BL	BL	BL	BL	BL	NA
17	Golden metal sheet	BL	BL	BL	IN	--	Cr <sup>6+</sup> : Negative
18	Chip resistor	BL	BL	BL	IN	BL	Cr <sup>6+</sup> : ND
19	Chip capacitor	BL	BL	BL	BL	BL	NA
20	Chip crystal oscillator	BL	BL	BL	BL	BL	NA
21	Chip IC	BL	BL	BL	BL	BL	NA
22	Brown plastic film	BL	BL	BL	BL	BL	NA
23	Grey plastic shell	BL	BL	BL	BL	BL	NA
24	Silvery metal sheet	BL	BL	BL	IN	--	Cr <sup>6+</sup> : Negative
25	Chip EC	BL	BL	BL	BL	BL	NA
26	Chip capacitor(grey)	BL	BL	BL	BL	BL	NA
27	Chip capacitor(multicolour)	BL	BL	BL	BL	BL	NA
28	Chip capacitor(white)	BL	BL	BL	BL	BL	NA
29	White-grey synthetic leather	BL	BL	BL	BL	BL	NA
30	White plastic shell	BL	BL	BL	BL	BL	NA



## 2. Phthalates

Test Method/Equipment:

1) With reference to IEC 62321-12:2023, determination of DBP, BBP, DEHP, DIBP by GC-MS

Serial No.	Part No.	Result (mg/kg)			
		DBP	BBP	DEHP	DIBP
T01	5+8+9+11+29 <sup>△</sup>	ND	ND	ND	ND
T02	10+12+16+23+30 <sup>△</sup>	ND	ND	ND	ND
T03	13+22 <sup>△</sup>	ND	ND	151	ND
T04	18+19+20+21+25 <sup>△</sup>	ND	ND	ND	ND
T05	26+27+28 <sup>△</sup>	ND	ND	ND	ND
T06	1	--	--	--	--
T07	2	--	--	--	--
T08	3	--	--	--	--
T09	4	--	--	--	--
T10	6	--	--	--	--
T11	7	--	--	--	--
T12	14	--	--	--	--
T13	15	--	--	--	--
T14	17	--	--	--	--
T15	24	--	--	--	--

### Remark:

(1) Results are obtained by XRF for primary screening, and further chemical testing by ICP (for Cd, Pb, Hg), UV-VIS (for Cr<sup>6+</sup>) and GC-MS (for PBBs, PBDEs) is required 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
Cd	$BL \leq (70-3\sigma) < IN < (130+3\sigma) \leq OL$	$BL \leq (70-3\sigma) < IN < (130+3\sigma) \leq OL$	$LOD < IN < (150+3\sigma) \leq OL$
Pb	$BL \leq (700-3\sigma) < IN < (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < IN < (1300+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < IN < (1500+3\sigma) \leq OL$
Hg	$BL \leq (700-3\sigma) < IN < (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < IN < (1300+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < IN < (1500+3\sigma) \leq OL$
Cr	$BL \leq (700-3\sigma) < IN$	$BL \leq (700-3\sigma) < IN$	$BL \leq (500-3\sigma) < IN$
Br	$BL \leq (300-3\sigma) < IN$	--	$BL \leq (250-3\sigma) < IN$

BL= Below Limit

OL= Over Limit

LOD = Limit of Detection

(2) "IN" expresses the inconclusive region, and further chemical testing to confirm whether it complies with the requirement of RoHS Directive.



- (3) The XRF screening test for RoHS elements – the reading may be different to the actual content in the sample be of non-uniformity composition.
- (4) mg/kg =milligram per kilogram=ppm,  $\mu\text{g}/\text{cm}^2$ = micrograms per square centimetre.
- (5) ND = Not Detected or lower than limit of quantitation.
- (6) NA = Not Applicable, as the XRF screening test result was below the limit or as the XRF screening directly determine that test result was over the limit, it was not need to conduct the wet chemical testing.
- (7) -- = Not Regulated
- (8) LOQ = Limit of quantitation.

Test Items	Pb	Cd	Hg	Cr <sup>6+</sup>		PBB	PBDE	DBP	BBP	DEHP	DIBP
Units	mg/kg	mg/kg	mg/kg	mg/kg	$\mu\text{g}/\text{cm}^2$	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOQ	2	2	2	8	0.1	5	5	50	50	50	50

The LOQ for single compound of PBBs and PBDEs is 5mg/kg, LOQ of Cr<sup>6+</sup> for polymer and composite sample is 8mg/kg and LOQ of Cr<sup>6+</sup> for metal sample is 0.1 $\mu\text{g}/\text{cm}^2$ .

- (9) According to IEC 62321-7-1:2015, determined of Cr<sup>6+</sup> on metal sample by boiling water extraction test method, and result is shown as Positive/Negative.

Boiling water extraction:

Negative = Absence of Cr<sup>6+</sup> coating, the detected concentration in boiling water extraction solution is less than 0.10 $\mu\text{g}/\text{cm}^2$ .

Positive = Presence of Cr<sup>6+</sup> coating, the detected concentration in boiling water extraction solution is greater than 0.13 $\mu\text{g}/\text{cm}^2$ .

Information on storage conditions and production date of the tested sample is unavailable and thus Cr<sup>6+</sup> results represent status of the sample at the time of testing.

- (10)RoHS Requirement

Restricted Substances	Limits
Cadmium (Cd)	0.01% (100 mg/kg)
Lead (Pb)	0.1% (1000 mg/kg)
Mercury (Hg)	0.1% (1000 mg/kg)
Chromium (VI) (Cr <sup>6+</sup> )	0.1% (1000 mg/kg)
Polybrominated Biphenyls (PBBs)	0.1% (1000 mg/kg)
Polybrominated Diphenyl Ethers (PBDEs)	0.1% (1000 mg/kg)
Dibutyl phthalate (DBP)	0.1% (1000 mg/kg)
Benzyl butyl phthalate (BBP)	0.1% (1000 mg/kg)
Di(2-ethylhexyl) phthalate (DEHP)	0.1% (1000 mg/kg)
Di-iso-butyl phthalate (DIBP)	0.1% (1000 mg/kg)



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(11) Abbreviation:

“Pb” denotes Lead, “Cd” denotes Cadmium, “Hg” denotes Mercury, “Cr” denotes Chromium, “Cr<sup>6+</sup>” denotes Hexavalent Chromium, “Br” denotes Bromine, “PBBs” denotes Total Polybrominated Biphenyls, “PBDEs” denotes Total Polybrominated Diphenyl Ethers.

“DBP” denotes Dibutyl phthalate, “BBP” denotes Benzyl butyl phthalate (BBP), “DEHP” denotes Bis(2-ethylhexyl)-phthalate, “DIBP” denotes Diisobutyl phthalate, “PHT” denotes Phthalates.

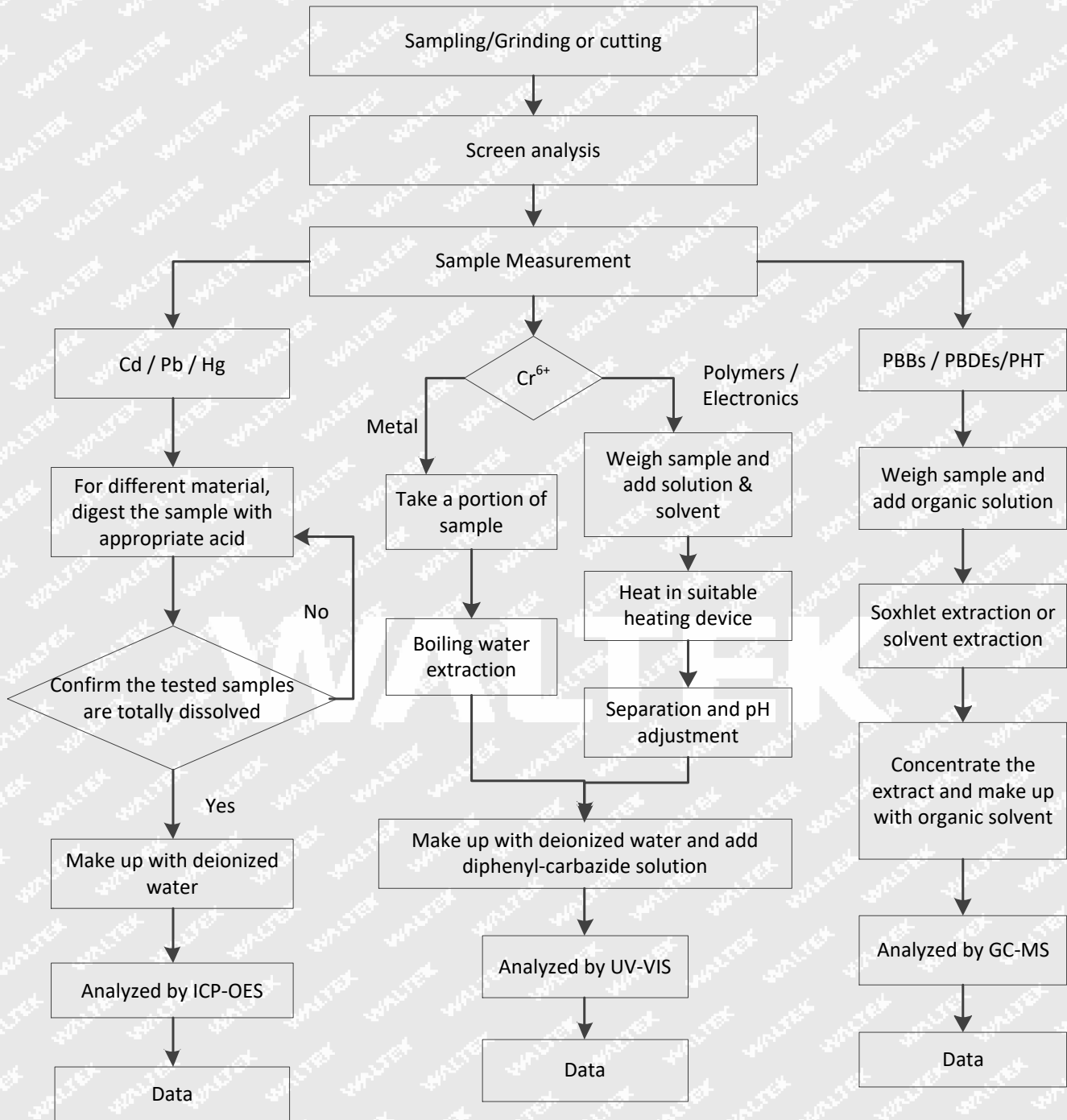
(12) “△”=As per applicant's requirement, the testing was conducted based on mixed components by weight in equal ratio, results are calculated by the minimum weight of mixed components.

(13) \* = According to the declaration from client, the source of lead in test sample is from the glass or ceramic material of that electronic component which is exempted by Directive 2011/65/EU ANNEX III-7(c)-I.

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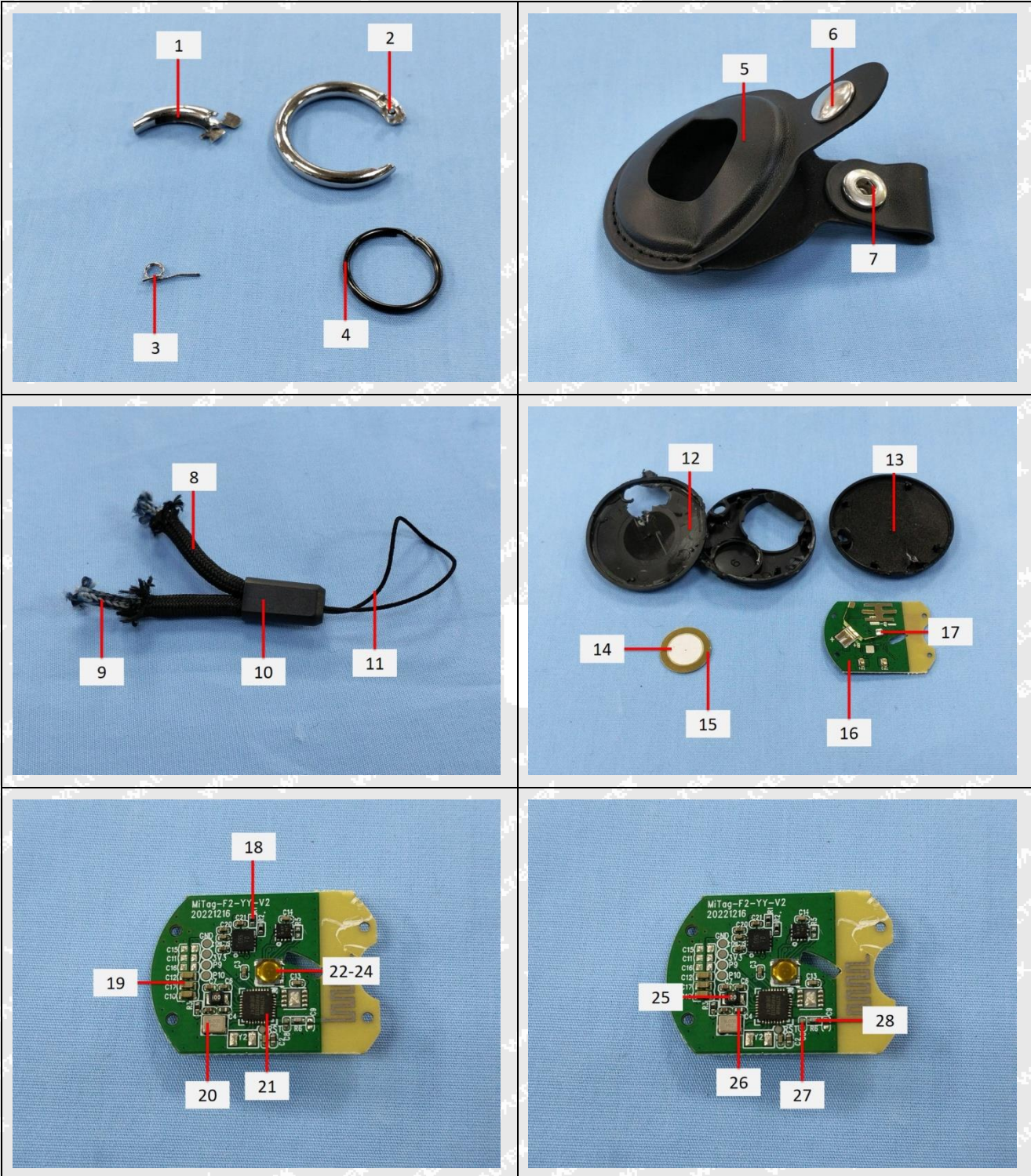


Testing Flow chart:





Photograph of parts tested:





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===== End of Report =====