

RoHS certificate, clock movement M2888



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检测
TESTING
CNAS L1744

TEST REPORT

LAB NO. : (8819)193-0082
DATE : Jul 31, 2019
PAGE : 1 OF 13

APPLICANT

DATE OF SUBMISSION : JUL 12, 2019
TEST PERIOD : JUL 12, 2019 TO JUL 31, 2019
SAMPLE DESCRIPTION : QUARTZ CLOCK MOVEMENT
Style No. : M2188/S2188/M2188D/M2018/S2018/M2888/S2888/1868/
Q5/Q6/M2166/S2166/S3268/M2188Y/S2188Y/S9188/M2288/
S2288/661/662
Manufacturer : LONGHAI ZHONGHUI WATCH CO.,LTD.
Sample Size: 3PCS

BUREAU VERITAS SHENZHEN CO.,LTD
DONGGUAN BRANCH



Harvey Xue
Manager, Analytical Lab

RT/Barton Chen/Lucy-lj Li

REMARK

If there are questions or concerns on this report, please contact the following persons:
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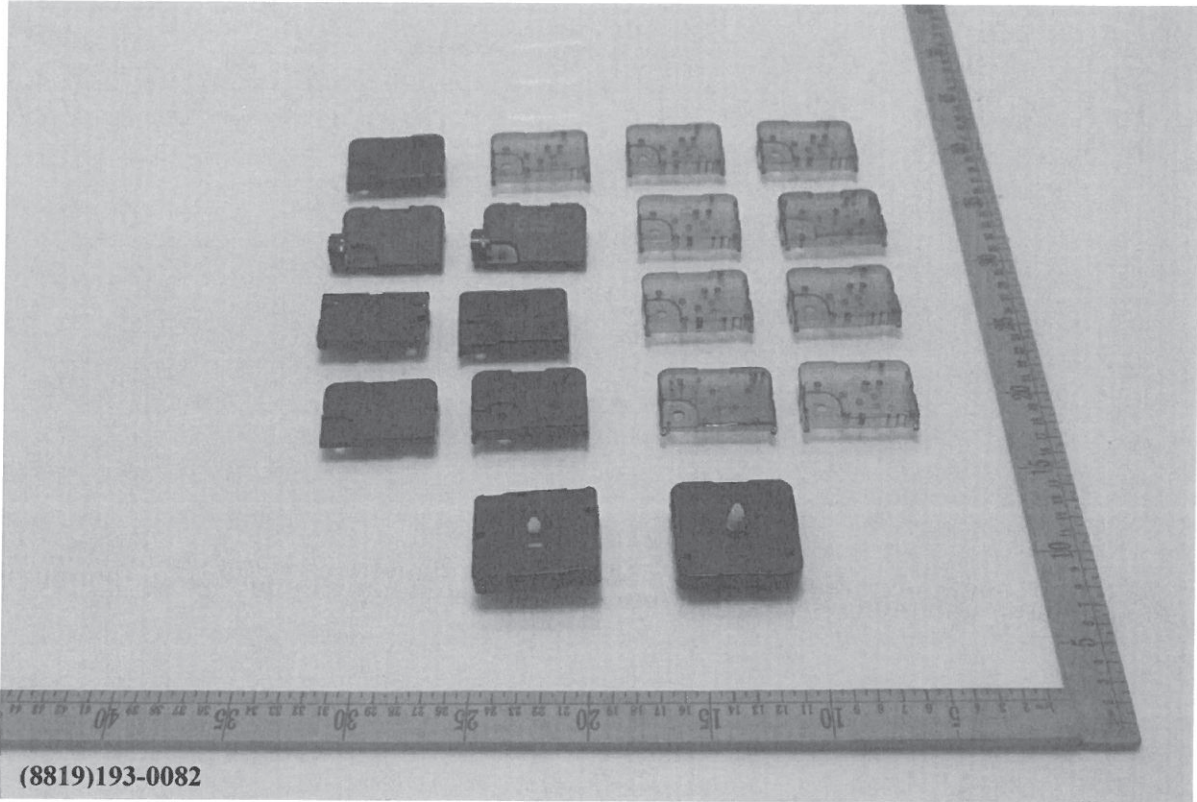
SUMMARY OF TEST RESULTS

TEST REQUESTED	CONCLUSION	REMARK
European Parliament and Council Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) with its Amendment Directive 2015/863/EU	PASS	-
The BBP/DBP/DEHP/DIBP content requirements of the European Parliament and Council Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) with its Amendment Directive 2015/863/EU	PASS	-



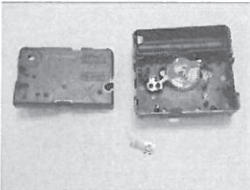


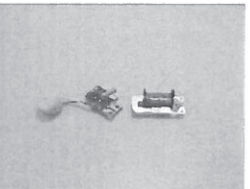
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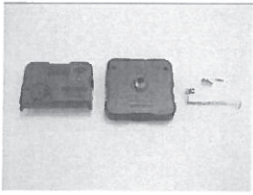
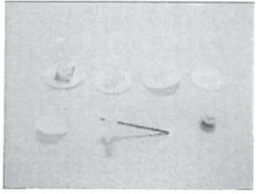
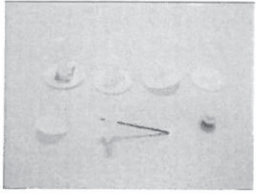
Photo of the Submitted Sample

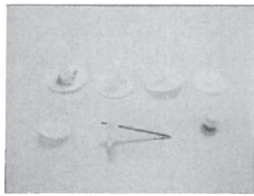
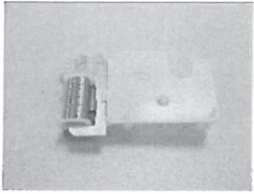
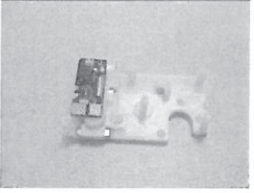



(8819)193-0082

Test Item Description and Photo List

Test Item(s)	Sample Photo	Item / Component Description(s)	Location(s)	Style(s)
I001		Black plastic	Housing	-
I002		Black plastic	Button, housing	-
I003		White plastic	Gear, housing	-
I004		Silvery metal	Contact plate, housing	-
I005		Silvery metal	Spring, housing	-
I006		Black plastic	Frame, housing	-
I007		White plastic	Gear	-
I008		Pink plastic	Gear	-
I009		Brown plastic	Gear	-
I010		White plastic	Gear	-
I011		White plastic	Ring	-
I012		Pink plastic	Gear	-
I013		Black magnet	Magnet, gear	-
I014		Beige plastic	Case, buzzer, PCB	-
I015		Beige plastic	Base, buzzer, PCB	-
I016		Silvery metal	Contact plate, buzzer, PCB	-
I017		Black magnet	Magnet, buzzer, PCB	-
I018		Coppery metal	Coil, buzzer, PCB	-
I019		Silvery metal	Coil holder, buzzer, PCB	-

Test Item(s)	Sample Photo	Item / Component Description(s)	Location(s)	Style(s)
I020		Silvery solder	Solder, buzzer, PCB	-
I021		Green coated brown plastic with coppery metal	PCB, buzzer, PCB	-
I022		Red soft plastic	Wire insulation, cable, buzzer, PCB	-
I023		White soft plastic	Wire insulation, cable, buzzer, PCB	-
I024		Coppery metal	Wire, cable, buzzer, PCB	-
I025		Silvery body	Crystal, PCB	-
I026		Silvery metal	Pin, crystal, PCB	-
I027		Black body	SMD IC, PCB	-
I028		Silvery solder	Solder, PCB	-
I029		Green coated brown plastic with coppery metal	PCB	-
I030		Coppery metal	Coil, inductor	-
I031		Black plastic	Coil holder, inductor	-
I032		Silvery metal	Coil holder, inductor	-
I033		Black plastic	Housing	-
I034		Black plastic	Gear, housing	-
I035		Silvery metal	Contact plate, housing	-
I036		Silvery metal	Spring, housing	-
I037		Golden metal	Nut, housing	-
I038		White plastic	Gear	-
I039		White plastic	Pipe, gear	-
I040		Silvery metal	Contact plate, gear	-

Test Item(s)	Sample Photo	Item / Component Description(s)	Location(s)	Style(s)
I041		Silvery metal	Shaft, gear	-
I042		Black magnet	Magnet, gear	-
I043		Beige plastic	Holder, inductor	-
I044		Coppery metal	Coil, inductor	-
I045		White plastic	Coil holder, inductor	-
I046		Silvery metal	Coil holder, inductor	-
I047		Silvery body	Crystal, PCB	-
I048		Silvery metal	Pin, crystal, PCB	-
I049		Grey body	SMD IC, PCB	-
I050		Silvery solder	Solder, PCB	-
I051		Green coated brown plastic with coppery metal	PCB	-
I052		Grey translucent plastic	Housing "S 2018"	-
I053		Grey translucent plastic	Housing "S 2166"	-
I054		Grey translucent plastic	Housing "JIN GONG 661"	-
I055		Grey translucent plastic	Housing "JIN GONG 662"	-
I056		Grey translucent plastic	Housing "S 2188"	-
I057		Grey translucent plastic	Housing "S 2888"	-
I058		Grey translucent plastic	Housing "HQ3268 SWEEP"	-
I059		Blue translucent plastic	Housing "Q5"	-
I060		Blue translucent plastic	Housing "Q6"	-



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Test Item(s)	Sample Photo	Item / Component Description(s)	Location(s)	Style(s)
I061		Black plastic	Housing "S2188Y"	-
I062		Black plastic	Housing "QA1868"	-
I063		Black plastic	Housing "M2188Y"	-
I064		Black plastic	Housing "M 2888"	-
I065		Black plastic	Housing "M 2166"	-
I066		Black plastic	Housing "M 2018"	-
I067		Black plastic	Housing "M 2188D"	-



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TEST RESULT

Compliance Test – European Parliament and Council Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) with its Amendment Directive 2015/863/EU

Test Method : See Appendix.

See Analytes and their corresponding Maximum Allowable Limit in Appendix

Parameter	Result						Conclusion
	Lead (Pb)	Cadmium (Cd)	Mercury (Hg)	Chromium VI (Cr VI)	PBBs	PBDEs	
Unit	mg/kg						-
Test Item(s)	-	-	-	-	-	-	-
I001	ND	ND	ND	ND	ND	ND	PASS
I002	ND	ND	ND	ND	ND	ND	PASS
I003	ND	ND	ND	ND	ND	ND	PASS
I004	ND	ND	ND	Negative*	NA	NA	PASS
I005	ND	ND	ND	Negative*	NA	NA	PASS
I006	ND	ND	ND	ND	ND	ND	PASS
I007	ND	ND	ND	ND	ND	ND	PASS
I008	ND	ND	ND	ND	ND	ND	PASS
I009	ND	ND	ND	ND	ND	ND	PASS
I010	ND	ND	ND	ND	ND	ND	PASS
I011	ND	ND	ND	ND	ND	ND	PASS
I012	ND	ND	ND	ND	ND	ND	PASS
I013	ND	ND	ND	ND	NA	NA	PASS
I014	ND	ND	ND	ND	ND	ND	PASS
I015	ND	ND	ND	ND	ND	ND	PASS
I016	ND	ND	ND	ND	NA	NA	PASS
I017	ND	ND	ND	ND	NA	NA	PASS
I018	ND	ND	ND	ND	NA	NA	PASS
I019	ND	ND	ND	ND	NA	NA	PASS
I020	ND	ND	ND	ND	NA	NA	PASS
I021	ND	ND	ND	ND	ND*	ND*	PASS
I022	ND	ND	ND	ND	ND	ND	PASS
I023	ND	ND	ND	ND	ND	ND	PASS
I024	ND	ND	ND	ND	NA	NA	PASS
I025	ND	ND	ND	ND	NA	NA	PASS



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TEST RESULT

-	Result						
Parameter	Lead (Pb)	Cadmium (Cd)	Mercury (Hg)	Chromium VI (Cr VI)	PBBs	PBDEs	Conclusion
Unit	mg/kg						-
Test Item(s)	-	-	-	-	-	-	-
I026	ND	ND	ND	ND	NA	NA	PASS
I027	ND	ND	ND	ND	ND	ND	PASS
I028	<500	ND	ND	ND	NA	NA	PASS
I029	ND	ND	ND	ND	ND	ND	PASS
I030	ND	ND	ND	ND	NA	NA	PASS
I031	ND	ND	ND	ND	ND	ND	PASS
I032	ND	ND	ND	Negative*	NA	NA	PASS
I033	ND	ND	ND	ND	ND	ND	PASS
I034	ND	ND	ND	ND	ND	ND	PASS
I035	ND	ND	ND	Negative*	NA	NA	PASS
I036	ND	ND	ND	Negative*	NA	NA	PASS
I037	ND	ND	ND	ND	NA	NA	PASS
I038	ND	ND	ND	ND	ND	ND	PASS
I039	ND	ND	ND	ND	ND	ND	PASS
I040	ND	ND	ND	Negative*	NA	NA	PASS
I041	ND	ND	ND	Negative*	NA	NA	PASS
I042	ND	ND	ND	ND	NA	NA	PASS
I043	ND	ND	ND	ND	ND	ND	PASS
I044	ND	ND	ND	ND	NA	NA	PASS
I045	ND	ND	ND	ND	ND	ND	PASS
I046	ND	ND	ND	Negative*	NA	NA	PASS
I047	ND	ND	ND	ND	NA	NA	PASS
I048	ND	ND	ND	ND	NA	NA	PASS
I049	ND	ND	ND	ND	ND	ND	PASS
I050	<500	ND	ND	ND	NA	NA	PASS
I051	ND	ND	ND	ND	ND	ND	PASS
I052	ND	ND	ND	ND	ND	ND	PASS
I053	ND	ND	ND	ND	ND	ND	PASS
I054	ND	ND	ND	ND	ND	ND	PASS
I055	ND	ND	ND	ND	ND	ND	PASS



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TEST RESULT

Parameter	Result						Conclusion
	Lead (Pb)	Cadmium (Cd)	Mercury (Hg)	Chromium VI (Cr VI)	PBBs	PBDEs	
Unit	mg/kg						-
Test Item(s)	-	-	-	-	-	-	-
I056	ND	ND	ND	ND	ND	ND	PASS
I057	ND	ND	ND	ND	ND	ND	PASS
I058	ND	ND	ND	ND	ND	ND	PASS
I059	ND	ND	ND	ND	ND	ND	PASS
I060	ND	ND	ND	ND	ND	ND	PASS
I061	ND	ND	ND	ND	ND*	158*	PASS
I062	ND	ND	ND	ND	ND*	146*	PASS
I063	ND	ND	ND	ND	ND*	496*	PASS
I064	ND	ND	ND	ND	ND	ND	PASS
I065	ND	ND	ND	ND	ND	ND	PASS
I066	ND	ND	ND	ND	ND	ND	PASS
I067	ND	ND	ND	ND	ND	ND	PASS

Note / Key:

ND = Not detected
 NR = Not requested
 NA = Not applicable
 Detection Limit : See Appendix.

“>” = Greater than
 mg/kg = milligram(s) per kilogram = ppm = part(s) per million
 % = percent

“<” = Less than
 10000 mg/kg = 1 %

Remark:

- The testing approach is listed in table of Appendix.
- * denotes as reported result(s) was (were) performed by wet chemistry method. Others were screened by XRF. For XRF screening, the result(s) of Cr VI was (were) reported as total chromium and the result(s) of PBBs and PBDEs was (were) reported as total bromine. Also, the XRF result(s) may be different to the actual content based on various factors including, but not limit to, sample size, thickness, area, non-uniformity composition, surface flatness.
- According to European Council Directive 2011/65/EU, Article 5 “Adaptation of the Annexes to scientific and technical progress”, exemption(s) should be granted to the materials and components of Test Item(s) in the lists in Annexes III and IV of this directive.
- The items 020,067 were resubmitted by client dated on Jul 29, 2019.

APPENDIX

List of Analytes and their Corresponding Test Methods, Detection Limit and Maximum Allowable Limit [Compliance Test for European Parliament and Council Directive 2011/65/EU] :						
No.	Name of Analytes	Detection Limit (mg/kg)				Maximum Allowable Limit (mg/kg)
		X-ray fluorescence (XRF)^[a]			Wet Chemistry	
		Plastic	Metallic / glass / ceramic	Others		
1	Lead (Pb)	100	200	200	10 ^[b]	1000
2	Cadmium (Cd)	50	50	50	10 ^[b]	100
3	Mercury (Hg)	100	200	200	10 ^[c]	1000
4	Chromium (Cr)	100	200	200	NA	NA
5	Chromium VI (Cr VI)	NA	NA	NA	3 ^[g, h] / 10 ^[d] / See ^[e, j]	1000 / Negative ^[l]
6	Bromine (Br)	200	NA	200	NA	NA
7	<ul style="list-style-type: none"> Polybromobiphenyls (PBBs) - Bromobiphenyl (MonoBB) - Dibromobiphenyl (DiBB) - Tribromobiphenyl (TriBB) - Tetrabromobiphenyl (TetraBB) - Pentabromobiphenyl (PentaBB) - Hexabromobiphenyl (HexaBB) - Heptabromobiphenyl (HeptaBB) - Octabromobiphenyl (OctaBB) - Nonabromobiphenyl (NonaBB) - Decabromobiphenyl (DecaBB) 	NA	NA	NA	Each 50 ^[f]	Sum 1000
8	<ul style="list-style-type: none"> Polybromodiphenyl ethers (PBDEs) - Bromodiphenyl ether (MonoBDE) - Dibromodiphenyl ether (DiBDE) - Tribromodiphenyl ether (TriBDE) - Tetrabromodiphenyl ether (TetraBDE) - Pentabromodiphenyl ether (PentaBDE) - Hexabromodiphenyl ether (HexaBDE) - Heptabromodiphenyl ether (HeptaBDE) - Octabromodiphenyl ether (OctaBDE) - Nonabromodiphenyl ether (NonaBDE) - Decabromodiphenyl ether (DecaBDE) 	NA	NA	NA	Each 50 ^[f]	Sum 1000



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List of Analytes and their Corresponding Test Methods, Detection Limit and Maximum Allowable Limit | Compliance Test for European Parliament and Council Directive 2011/65/EU | :

NA = Not applicable

- [a] Test method with reference to International Standard IEC 62321-3-1: 2013.
- [b] Test method with reference to International Standard IEC 62321-5: 2013.
- [c] Test method with reference to International Standard IEC 62321-4: 2017.
- [d] Polymers and Electronics - Test method with reference to International Standard IEC 62321-7-2:2017.
- [e] Metal - Test method with reference to International Standard IEC 62321-7-1: 2015.
- [f] Test method with reference to International Standard IEC 62321-6: 2015.
- [g] Leather - Test method International Standard ISO 17075-1:2017.
- [h] Other Than Metal, Leather, Polymers and Electronics - Test method with reference to International Standard ISO 17075-1:2017.
- [i] The principle of this method was evaluated and supported by two studies organized by IEC TC 111 WG3. These studies were focused on detecting the presence of Cr VI in the corrosion protection coatings on metallic samples. Result(s) of Cr VI for metallic material(s) was (were) expressed in term of positive and negative. Negative means the absence of Cr VI on the tested areas and the result(s) was (were) regarded as in compliance with European Parliament and Council Directive 2011/65/EU, Article 4(1). While, positive means the presence of Cr VI on tested areas and the result(s) was (were) regarded as in conflict with European Parliament and Council Directive 2011/65/EU, Article 4(1).
- [j]

Testing Approach | Compliance Test for European Parliament and Council Directive 2011/65/EU | :

The testing approach was with reference to the following document(s).

- 1 International Standards IEC 62321-1: 2013 and IEC 62321-2: 2013
- 2 "RoHS Enforcement Guidance Document Version 1" by EU RoHS Enforcement Authorities Informal Network. (May 2006)
- 3 "RoHS Regulations - Government Guidance Notes" by United Kingdom Department for Business Innovation & Skills. (February 2011)
- 4 "Final Report to RoHS substances (Hg, Pb, Cr(VI), Cd, PBB and PBDE) in electrical and electronic equipment in Belgium" by Belgium Federal Public Service Health, Food Chain Safety and Environment. (November 2005)

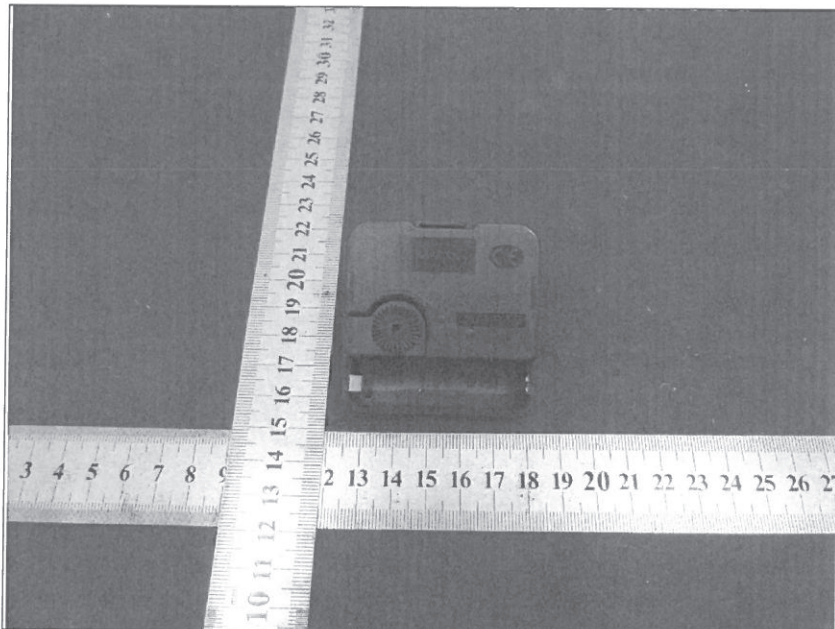
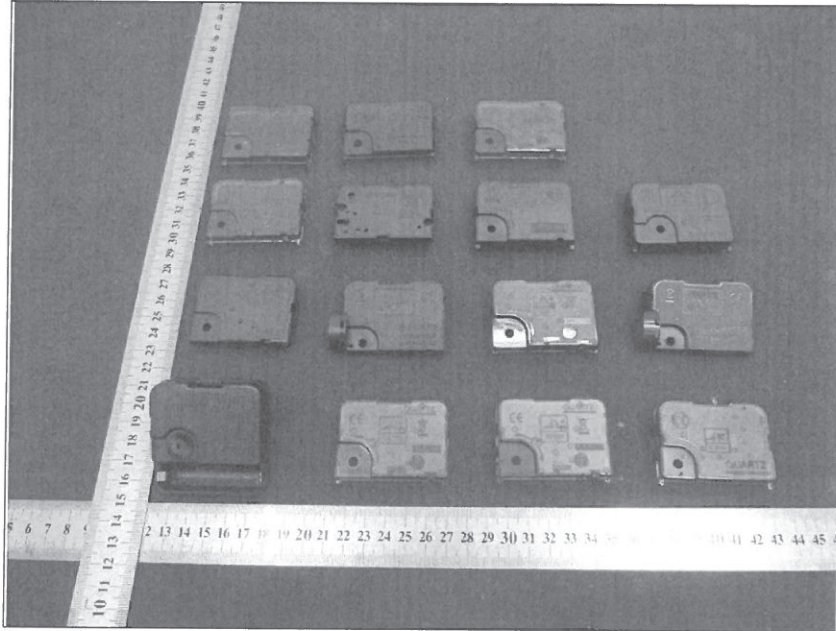


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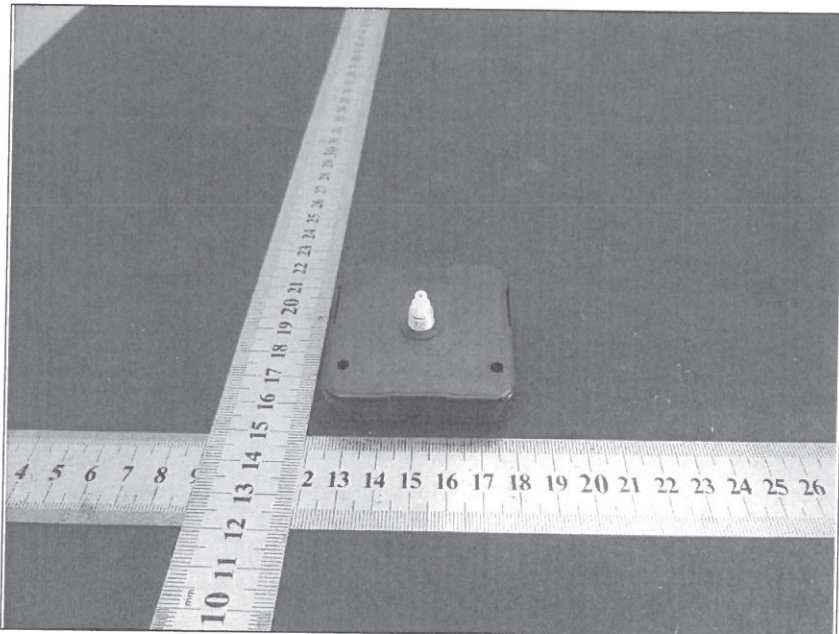
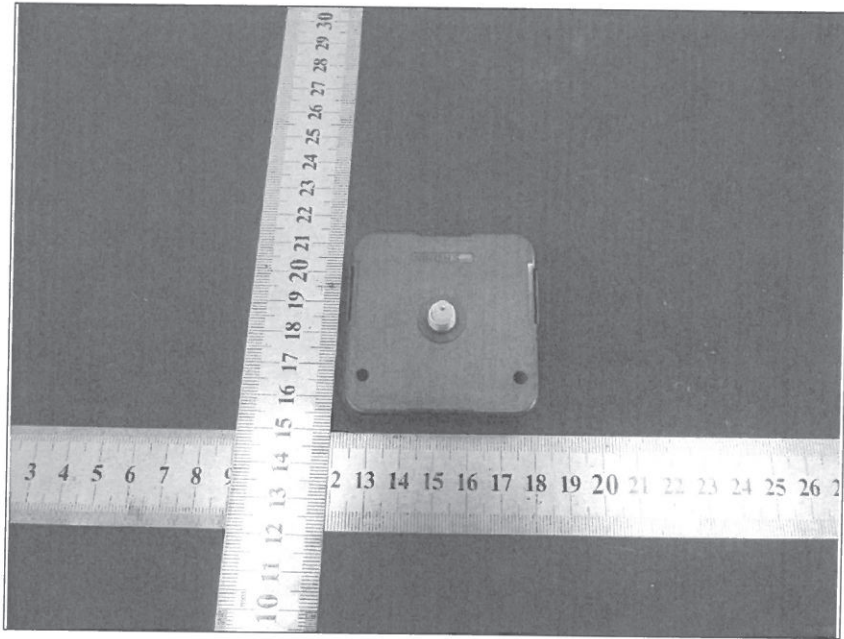
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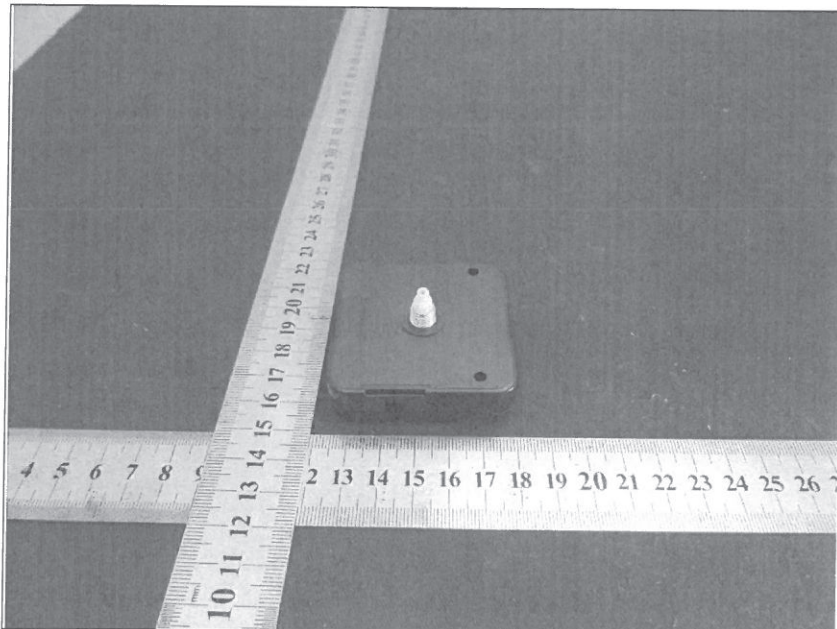
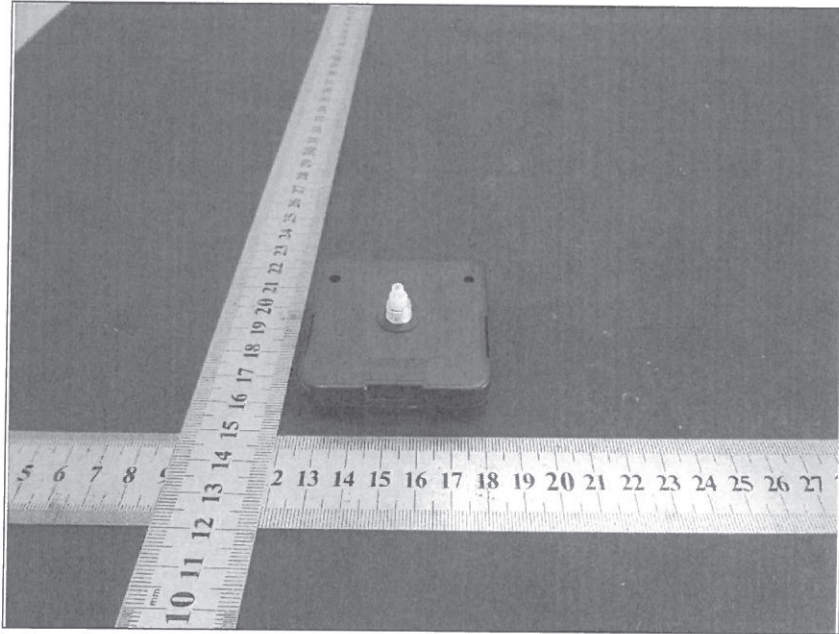
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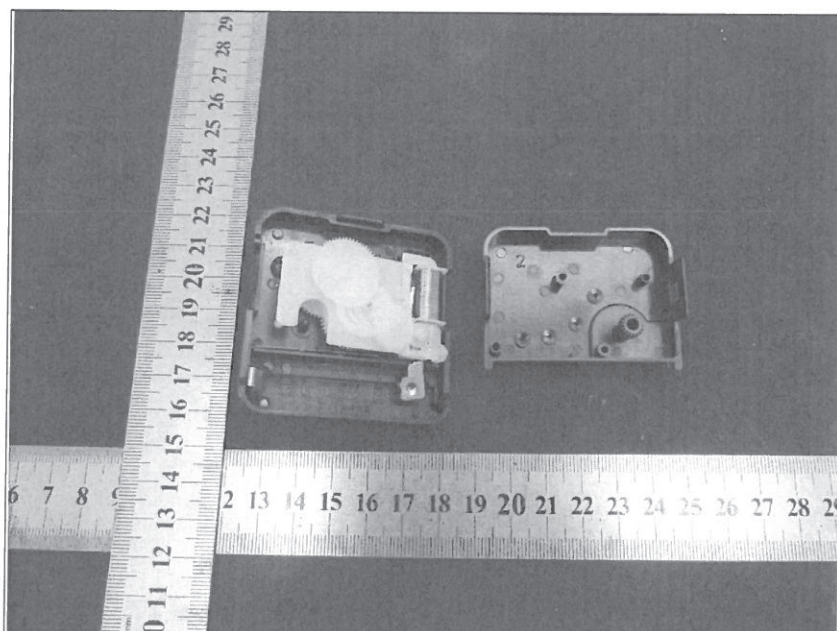
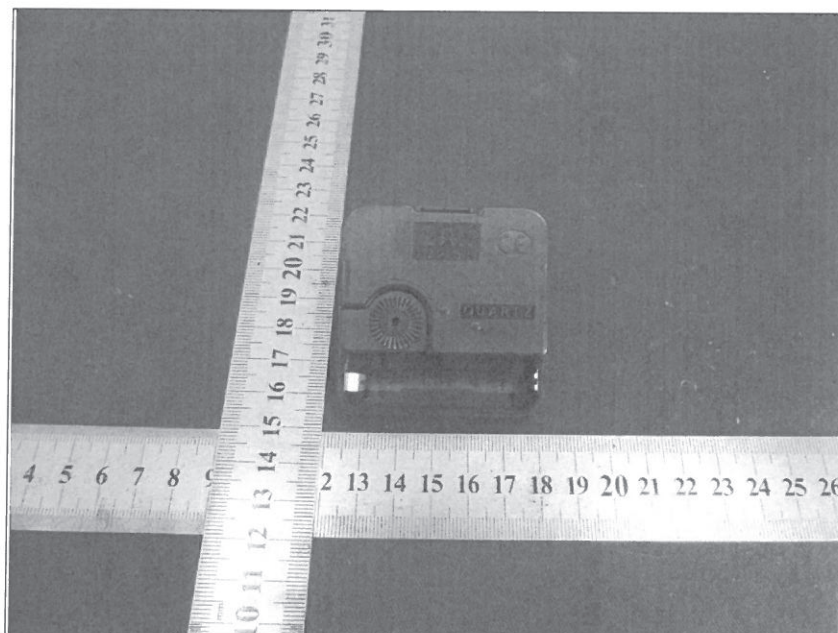
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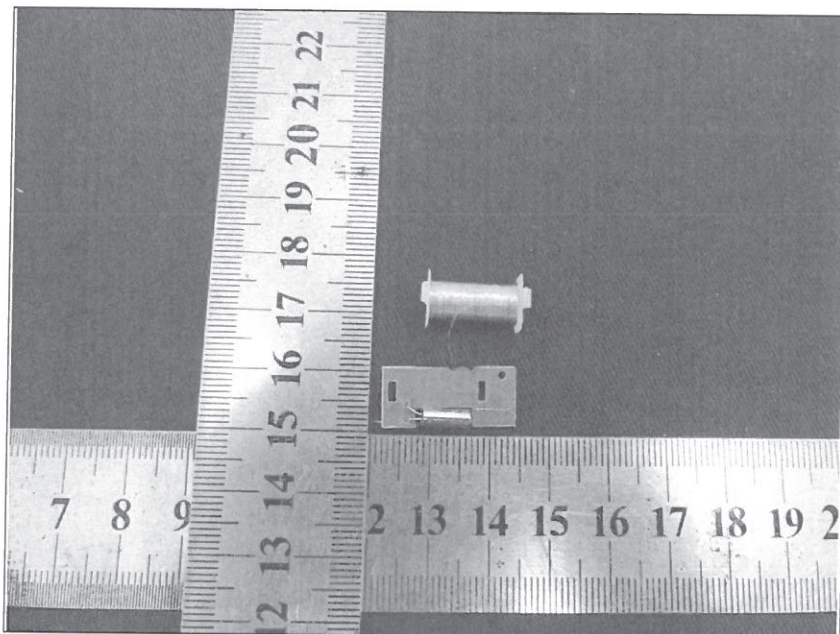
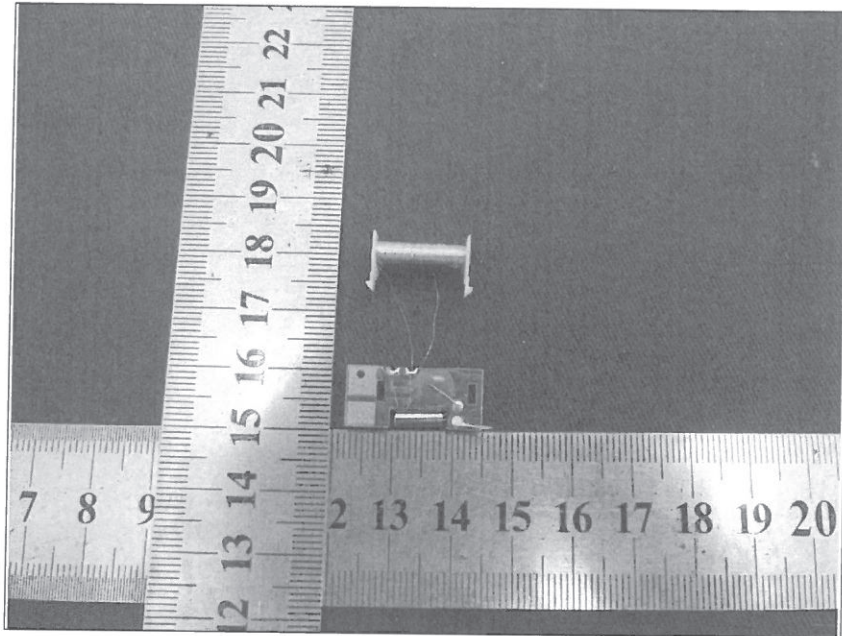
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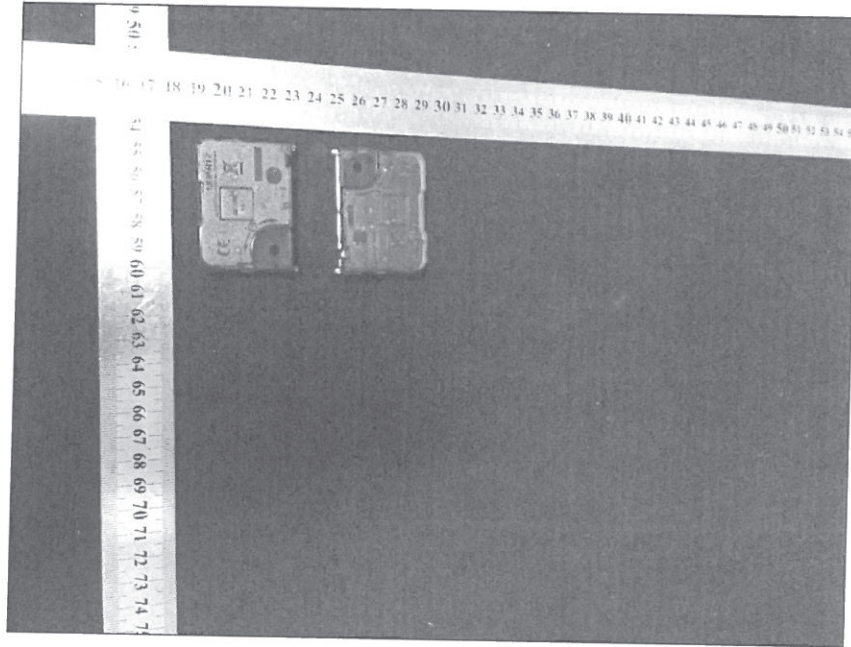
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