

# Test Report

Report No.: AGC07709200701-001

Date: Jul.08, 2020

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Applicant: Dongguan Dosin Hardware Electronics Co.,Ltd  
Address: No 5,Xinyuan Fifth Road, Humen Town, Dongguan,Guangdong  
Test site: 6/F., Building 2, Sanwei Chaxi Industrial Park, Sanwei Community, Hangcheng Street, Bao'an District, Shenzhen, Guangdong, China

## Report on the submitted sample(s) said to be:

Sample Name: SMA connector  
Mode No.: DOSIN-806  
Series model.: SMA connector series  
Difference between test model and series model: Appearance and size differences  
Supplier: Dosin  
Manufacturer: Dongguan Dosin Hardware Electronics Co.,Ltd  
Address: No 5,Xinyuan Fifth Road, Humen Town, Dongguan,Guangdong  
Sample Received Date: Jul.02, 2020  
Testing Period: Jul.02, 2020 to Jul.08, 2020

## Test Requested:

As specified by client, to determine the Pb, Cd, Hg, Cr<sup>6+</sup>, PBBs, PBDEs, DBP, BBP, DEHP, DIBP content in the submitted sample in accordance with Directive 2011/65/EU (RoHS) and its amendment directive (EU) 2015/863 on XRF and Chemical Method.

## Conclusion

Pass

Approved by:   
Liangdan, Jessie Liang  
Technical Director



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No.	Sample Description	
1	Connector	Copper seat
2		Copper pin
3		White plastic

**Test Result:**

(Test Method/ Instrument/ MDL and Limit: See Appendix)

No.	Test result (mg/kg)										Conclusion	
	Pb	Cd	Hg	Cr <sup>6+</sup>	PBBs	PBDEs	DIBP	DBP	BBP	DEHP		
1	29573*	N.D.	N.D.	N.D.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Conformity
2	20857*	N.D.	N.D.	N.D.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Conformity
3	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.*	N.D.*	N.D.*	N.D.*	N.D.*	Conformity

**Note:**

mg/kg = milligram per kilogram

µg/cm<sup>2</sup> = microgram per square centimeter

N.D.=Not Detected (less than method detection limit)

N/A= Not applicable

MDL = Method Detection Limit

**Exemption**

No.	Exemption clause	Content
1, 2	6(c)	Copper alloy containing up to 4 % lead by weight

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**Remark:**

- \*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, nonuniformity composition, surface flatness.
- This XRF Scanning report is for reference purposes only. The applicant shall make its/his/her own judgment as to whether the information provided in this XRF screening report is sufficient for its/his/her purposes.

The result shown in this XRF scanning report will differ based on various factors, including but not limited to, the sample size, thickness, area, surface flatness, equipment parameters and matrix effect (e.g. plastic, rubber, metal, glass, ceramic etc.). Further wet chemical pre-treatment with relevant chemical equipment analysis are required to obtain quantitative data.

- Boiling-water-extraction:

Number	Colorimetric result (Cr(VI) concentration)	Qualitative result
1	The sample solution is < the 0,10 µg/cm <sup>2</sup> equivalent comparison standard solution	The sample is negative for Cr(VI) – The Cr(VI) concentration is below the limit of quantification. The coating is considered a non-Cr(VI) based coating.
2	The sample solution is ≥ the 0,10 µg/cm <sup>2</sup> and ≤ the 0,13 µg/cm <sup>2</sup> equivalent comparison standard solutions	The result is considered to be inconclusive – Unavoidable coating variations may influence the determination.
3	The sample solution is > the 0,13 µg/cm <sup>2</sup> equivalent comparison standard solution	The sample is positive for Cr(VI) – The Cr(VI) concentration is above the limit of quantification and the statistical margin of error. The sample coating is considered to contain Cr(VI).

- Negative indicates the absence of Cr(VI) on the tested areas concentration is below the limit of quantification. The coating is considered a non-Cr(VI) based coating.  
Uncertainty indicates the absence of Cr(VI) on the tested areas unavoidable coating variations may influence the determination.  
Positive indicates the presence of Cr(VI) on the tested areas concentration is above the limit of quantification and the statistical margin of error. The sample coating is considered to contain Cr(VI).  
Storage conditions and production date of the tested sample are unavailable and thus result of Cr(VI) represent status of the sample at the time of testing.

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**Appendix:**

Test Item	Test Method/ Instrument	MDL	Limit
<b>X-ray Fluorescence Spectrometry(XRF)</b>			
Lead (Pb)	IEC 62321-3-1:2013 / XRF	200mg/kg	≤1000mg/kg
Cadmium (Cd)		50mg/kg	≤100mg/kg
Mercury (Hg)		200mg/kg	≤1000mg/kg
Total Chromium		200mg/kg	/
Total Bromine		200mg/kg	/
<b>Wet Chemistry Method</b>			
Lead (Pb)	IEC 62321-5:2013/ ICP-OES	10mg/kg	≤1000mg/kg
Cadmium (Cd)	IEC 62321-5:2013/ ICP-OES	10mg/kg	≤100mg/kg
Mercury (Hg)	IEC 62321-4: 2013+A1:2017/ ICP-OES	10mg/kg	≤1000mg/kg
Non-metal Hexavalent Chromium (Cr <sup>6+</sup> )	IEC 62321-7-2:2017/ UV-Vis	8mg/kg	≤1000mg/kg
Metal Hexavalent Chromium (Cr <sup>6+</sup> )	IEC 62321-7-1:2015/ UV-Vis	0.1µg/cm <sup>2</sup>	/
Polybrominated Biphenyls (PBBs) -Monobromobiphenyl (MonoBB) -Dibromobiphenyl (DiBB) -Tribromobiphenyl (TriBB) -Tetrabromobiphenyl (TetraBB) -Pentabromobiphenyl (PentaBB) -Hexabromobiphenyl (HexaBB) -Heptabromobiphenyl (HeptaBB) -Octabromobiphenyl (OctaBB) -Nonabromodiphenyl (NonaBB) -Decabromodiphenyl (DecaBB)	IEC 62321-6:2015/ GC-MS	Single 5mg/kg	Sum ≤1000mg/kg
Polybrominated Diphenylethers (PBDEs) -Monobromodiphenyl 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)	IEC 62321-6:2015/ GC-MS	Single 5mg/kg	Sum ≤1000mg/kg
Di-iso-butyl phthalate (DIBP)	IEC 62321-8:2017/ GC-MS	50mg/kg	≤1000mg/kg
Dibutyl phthalate (DBP)		50mg/kg	≤1000mg/kg
Butylbenzyl phthalate (BBP)		50mg/kg	≤1000mg/kg
Di-(2-ethylhexyl) Phthalate (DEHP)		50mg/kg	≤1000mg/kg

**Note:**

“≤”= Less than or equal to

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# Test Report

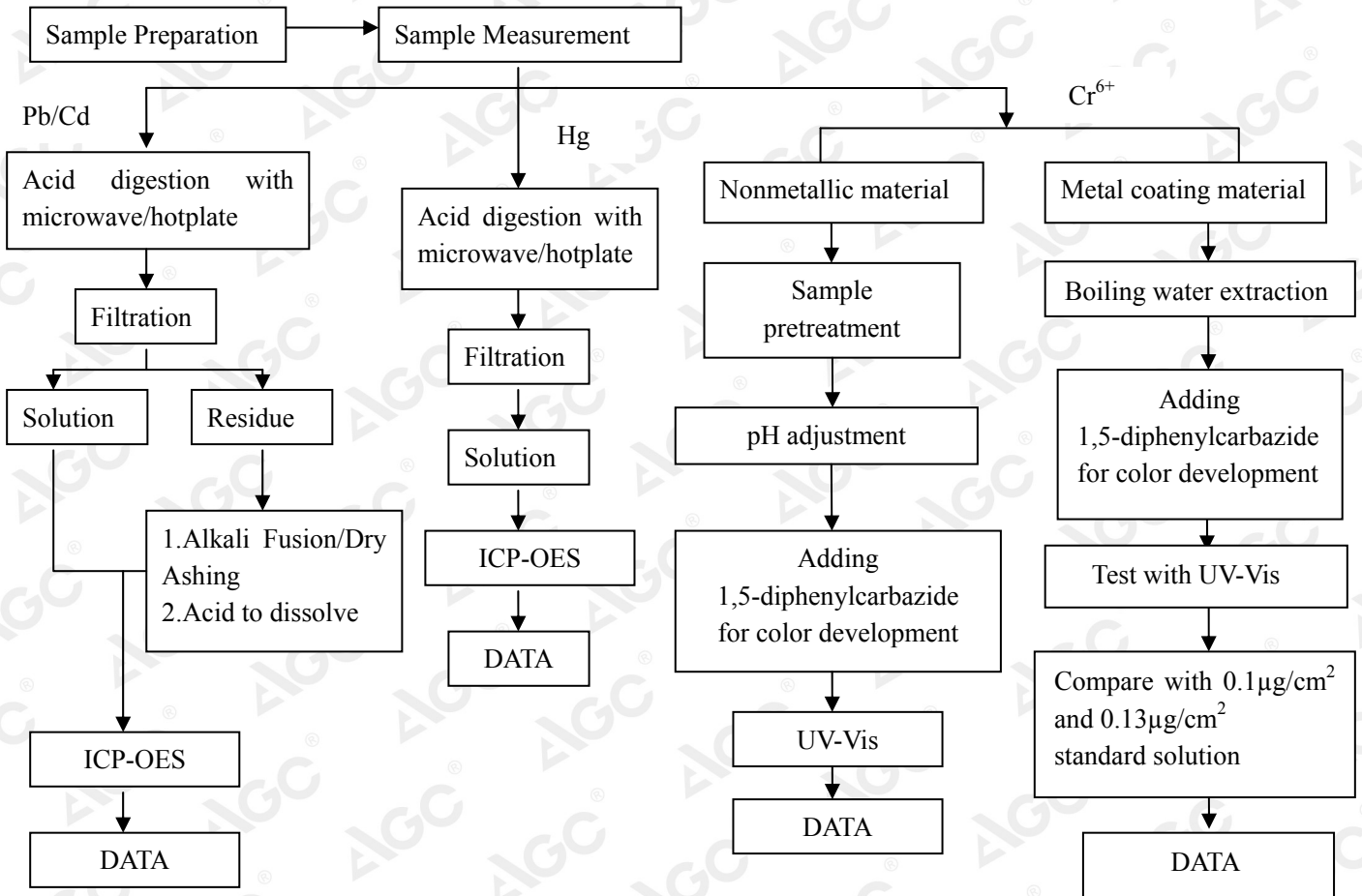
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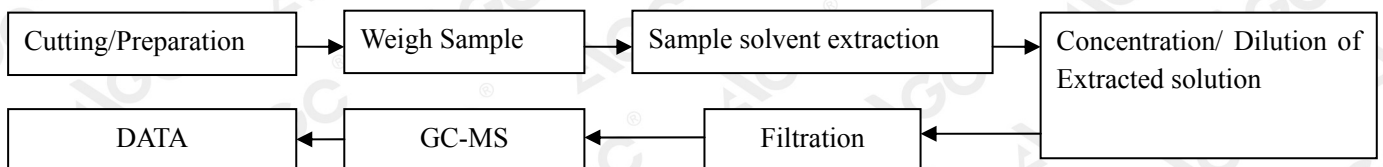
## Test Flow Chart

### 1. For Pb, Cd, Hg, Cr<sup>6+</sup>



These sample were dissolved totally by pre-conditioning method according to above flow chart (Cr<sup>6+</sup> test method excluded)

### 2. For PBBs, PBDEs, DBP, BBP, DEHP, DIBP



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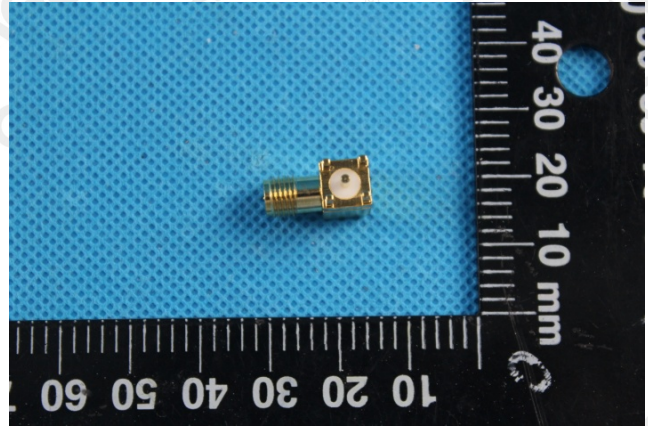
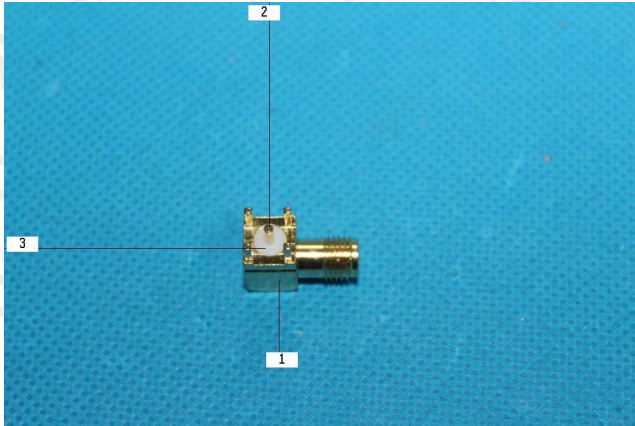
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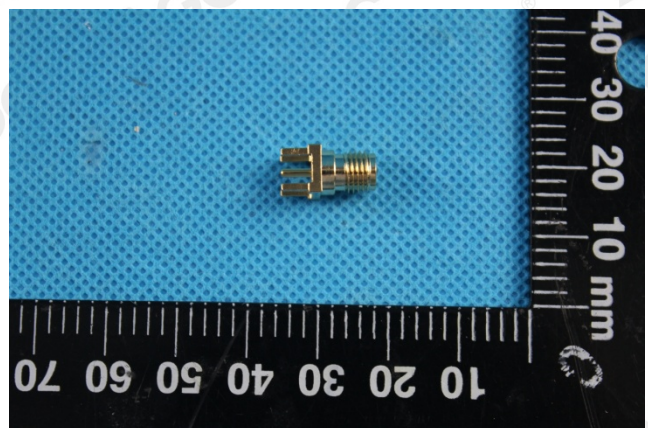
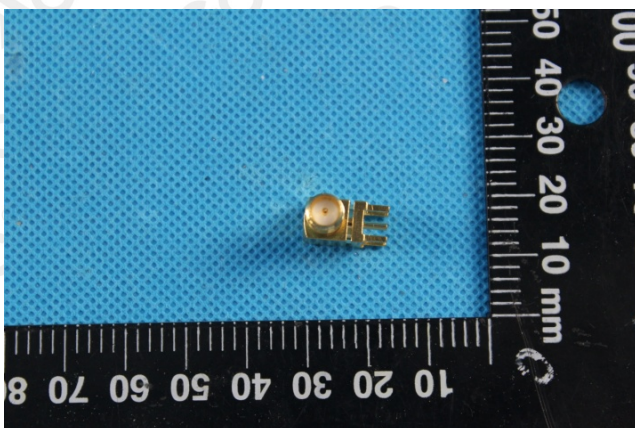
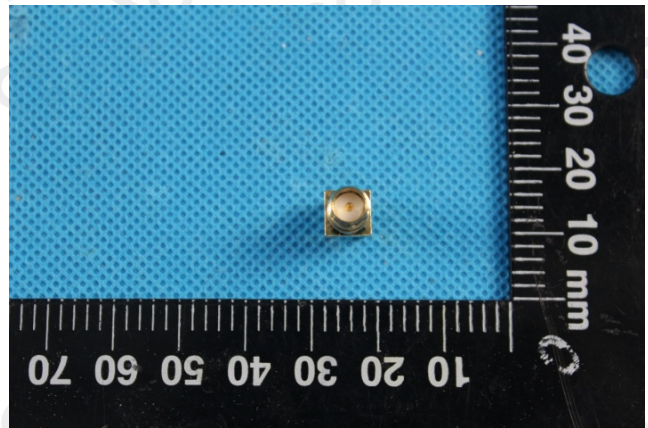
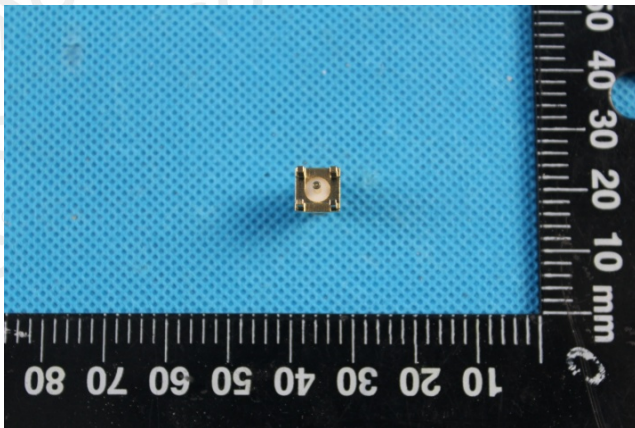
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## The photo of the sample



Test sample



**AGC07709200701-001**

AGC authenticate the photo only on original report

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

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**No.18 C**