

Test Report

No. CKGEC2200698516

Date: 01 Aug 2022

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Client Name : LIOWN SEMICONDUCTOR CO., LTD

Client Address : LIOWN SEMICONDUCTOR INDUSTRIAL PARK, XUANMEN INDUSTRIAL ZONE, LUPU TOWN,
YUHUAN, ZHEJIANG PROVINCE

Sample Name : Spark Gap SMD

Model No. : GS31

Client Ref. Info. : GS14/GS20/GS26

The above sample(s) and information were provided by the client.

SGS Job No. : 10015730 - CQ

Date of Sample Received : 26 Jul 2022

Testing Period : 26 Jul 2022 - 01 Aug 2022

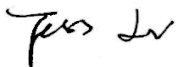
Test Requested : Selected test(s) as requested by the client.

Test Method(s) : Please refer to next page(s).

Test Result(s) : Please refer to next page(s).

Conclusion : Based on the performed tests on submitted samples, the results of Lead do not comply with the limits as set by GB/T26572-2011.

Signed for and on behalf of
SGS-CSTC Standards Technical Services (Chongqing) Co., Ltd.



Tess Lv
Approved Signatory

scan to see the report



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Test Result(s) :

Test Part Description :

Specimen No.	SGS Sample ID	Description
SN1	CKG22-006985.011	Colorless transparent glass
SN2	CKG22-006985.012	Silvery / copper colored metal

Remarks :

- (1) 1 mg/kg = 0.0001%
- (2) MDL = Method Detection Limit
- (3) ND = Not Detected (< MDL)
- (4) "-" = Not Regulated

Elementary Analysis and Flame Retardants

Test Method : With reference to GB/T26125-2011

- (1) Determination of Cadmium by ICP-OES.
- (2) Determination of Lead by ICP-OES.
- (3) Determination of Mercury by ICP-OES.
- (4) Determination of Hexavalent Chromium by Colorimetric Method using UV-Vis.
- (5) Determination of PBBs and PBDEs by GC-MS.

Test Item(s)	Limit	Unit	MDL	011
Cadmium (Cd)	100	mg/kg	2	ND
Lead (Pb)	1,000	mg/kg	2	148820#
Mercury (Hg)	1,000	mg/kg	2	ND
Hexavalent Chromium (CrVI)	1,000	mg/kg	2	ND
Sum of PBBs	1,000	mg/kg	-	ND
Monobromobiphenyl	-	mg/kg	5	ND
Dibromobiphenyl	-	mg/kg	5	ND
Tribromobiphenyl	-	mg/kg	5	ND
Tetrabromobiphenyl	-	mg/kg	5	ND
Pentabromobiphenyl	-	mg/kg	5	ND
Hexabromobiphenyl	-	mg/kg	5	ND
Heptabromobiphenyl	-	mg/kg	5	ND
Octabromobiphenyl	-	mg/kg	5	ND
Nonabromobiphenyl	-	mg/kg	5	ND
Decabromobiphenyl	-	mg/kg	5	ND
Sum of PBDEs	1,000	mg/kg	-	ND



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<u>Test Item(s)</u>	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>011</u>
Monobromodiphenyl ether	-	mg/kg	5	ND
Dibromodiphenyl ether	-	mg/kg	5	ND
Tribromodiphenyl ether	-	mg/kg	5	ND
Tetrabromodiphenyl ether	-	mg/kg	5	ND
Pentabromodiphenyl ether	-	mg/kg	5	ND
Hexabromodiphenyl ether	-	mg/kg	5	ND
Heptabromodiphenyl ether	-	mg/kg	5	ND
Octabromodiphenyl ether	-	mg/kg	5	ND
Nonabromodiphenyl ether	-	mg/kg	5	ND
Decabromodiphenyl ether	-	mg/kg	5	ND

Notes :

- (1) The maximum permissible limit is quoted from the GB/T26572-2011 .
- (2) # : Exceed the limit.
- (3) The sample(s) 011 was/were test result of Lead is only for reference.

Elementary Analysis

Test Method : With reference to GB/T26125-2011

- (1) Determination of Cadmium by ICP-OES.
- (2) Determination of Lead by ICP-OES.
- (3) Determination of Mercury by ICP-OES.
- (4) Determination of Hexavalent Chromium by spot test / Colorimetric Method using UV-Vis.

<u>Test Item(s)</u>	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>012</u>
Cadmium (Cd)	100	mg/kg	2	ND
Lead (Pb)	1,000	mg/kg	2	ND
Mercury (Hg)	1,000	mg/kg	2	ND
Hexavalent Chromium (CrVI)	-	-	◇	Negative

Notes :

- (1) The maximum permissible limit is quoted from the GB/T26572-2011 .
- (2) ◇ Spot-test:
Negative = Absence of CrVI coating, Positive = Presence of CrVI coating;
(The tested sample should be further verified by boiling-water-extraction method if the spot test result is Negative or cannot be confirmed.)
◇ Boiling-water-extraction:
Negative = Absence of CrVI coating
Positive = Presence of CrVI coating; the detected concentration in boiling-water-extraction solution is equal or greater than 0.02 mg/L with 50 cm² sample surface area.



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Information on storage conditions and production date of the tested sample is unavailable and thus results of Cr(VI) represent status of the sample at the time of testing.

Remark: Results & photo(s) of this report refer to test report CKGEC2200698515 .

Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule ($w=0$) stated in ILAC-G8:09/2019.

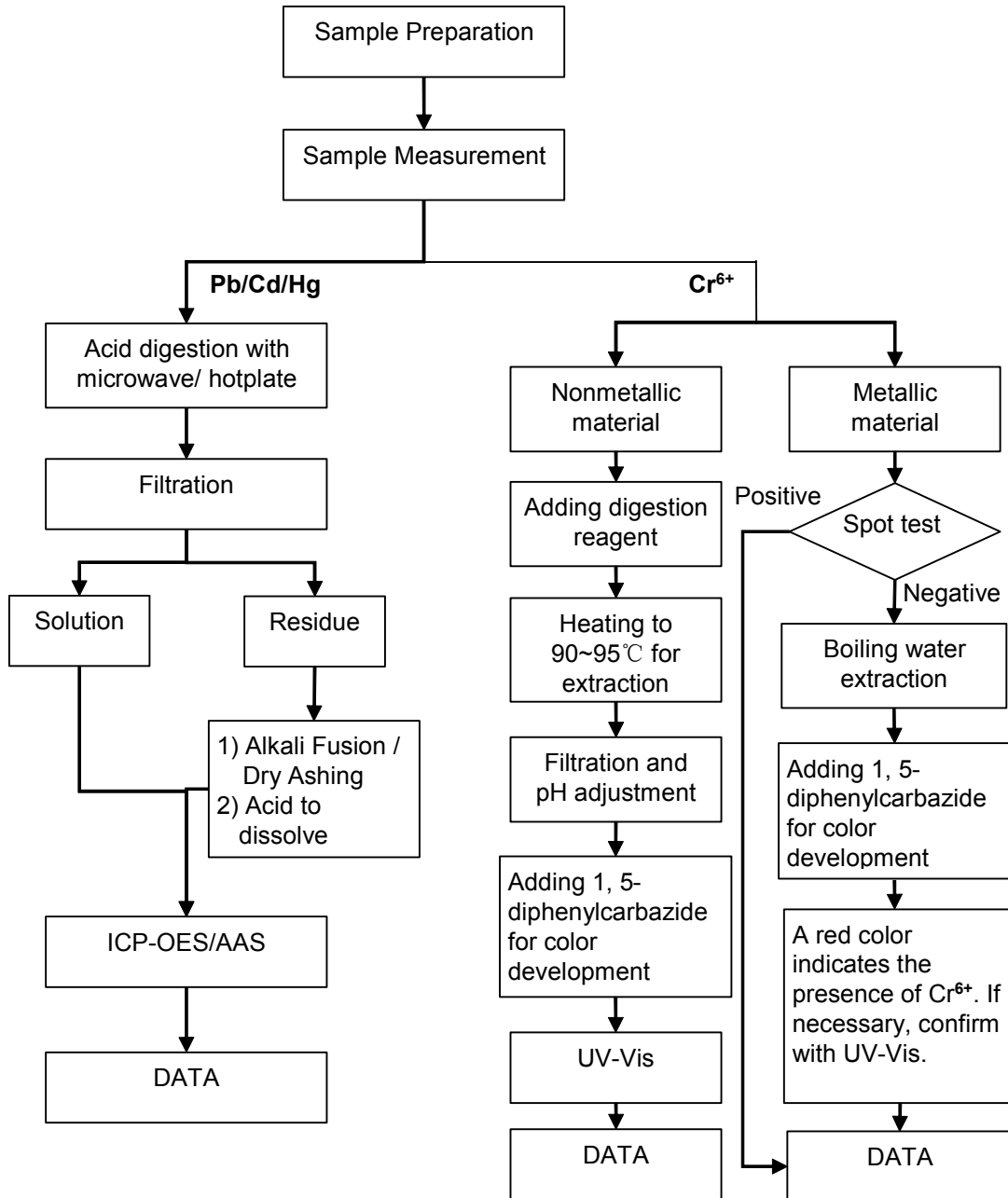


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Pb/Cd/Hg/Cr6+ Testing Flow Chart

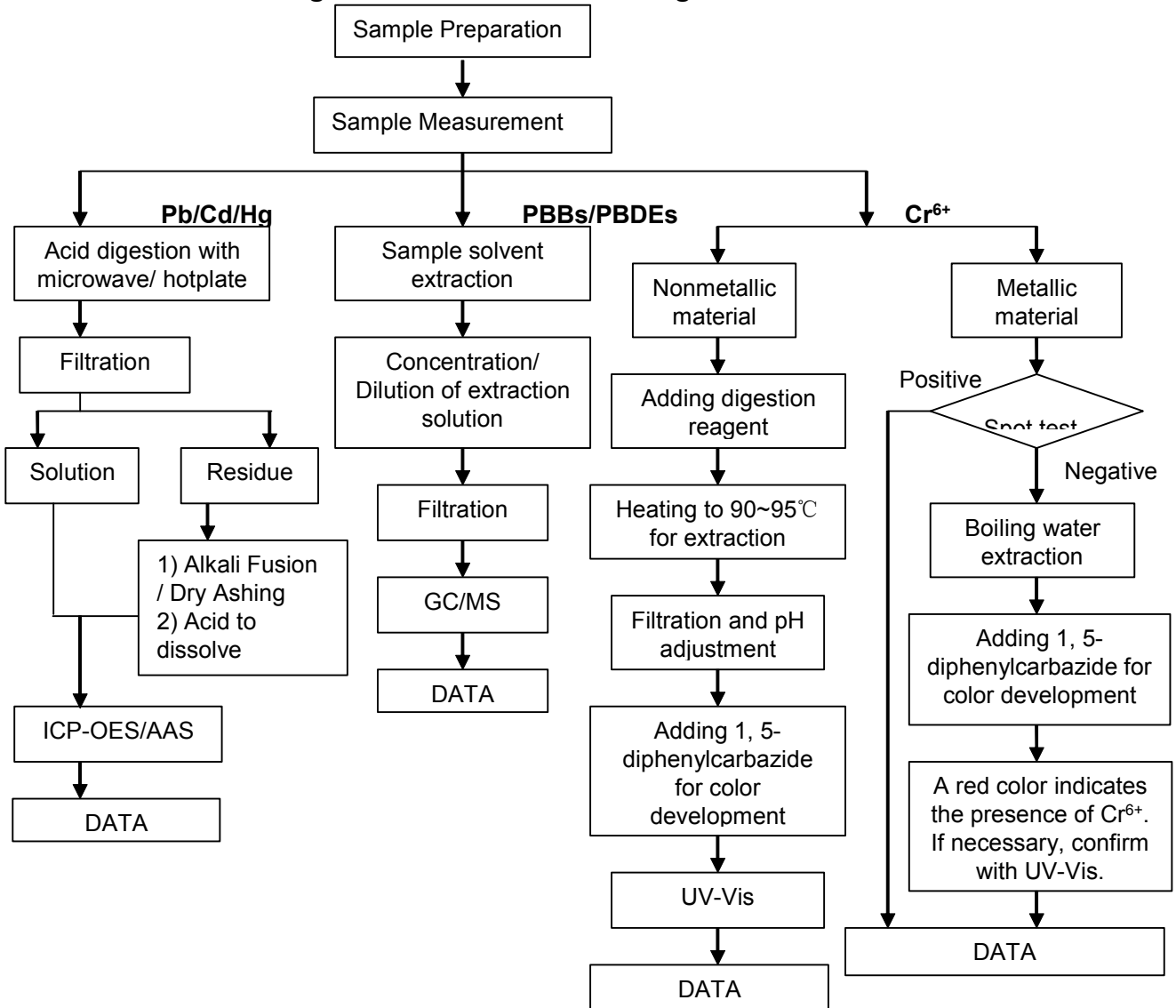


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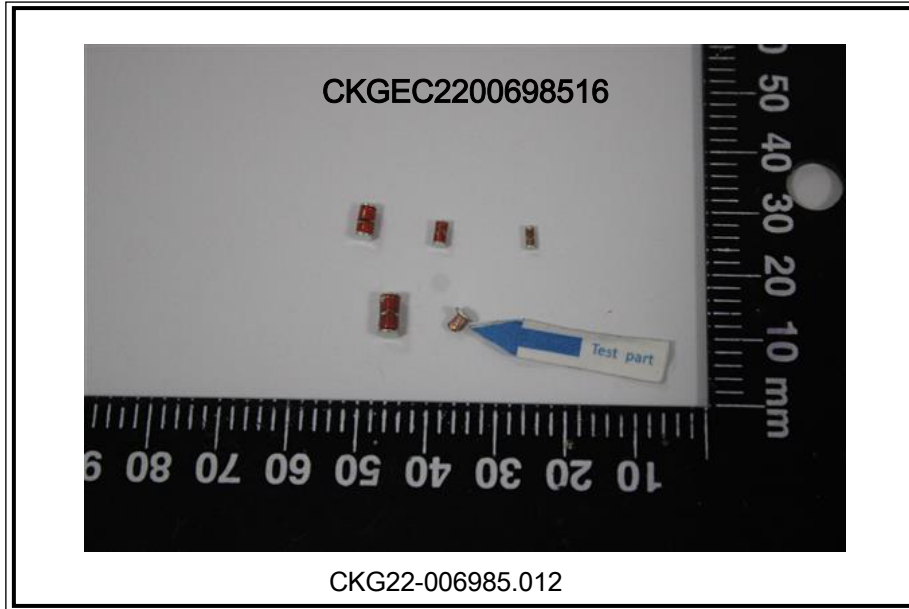
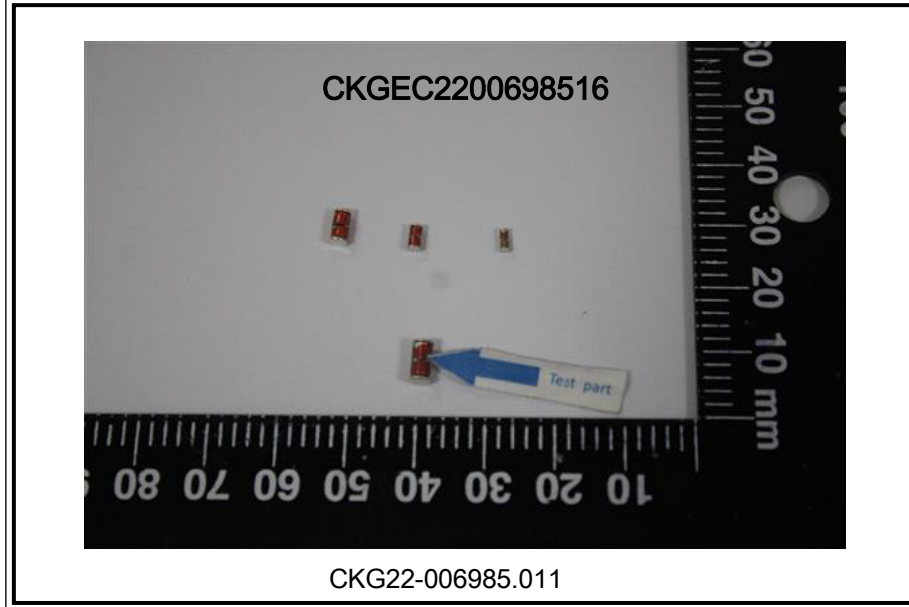
Pb/Cd/Hg/Cr6+/PBBs/PBDEs Testing Flow Chart



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Sample photo:



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*** End of Report ***



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