

Test Report

No. CKGEC2200698504

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 DIP

Model No. : GS41

Client Ref. Info. : GS31/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

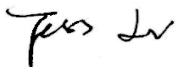
Test Requested : Selected test(s) as requested by the client.

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	CKG22-006985.001	White ceramics
SN2	CKG22-006985.002	Colourful glass
SN3	CKG22-006985.003	Copper colored metal
SN4	CKG22-006985.004	Silvery metal pin
SN5	CKG22-006985.005	Silvery / copper colored metal with solder

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.

<u>Test Item(s)</u>	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>	<u>002</u>
Cadmium (Cd)	100	mg/kg	2	ND	ND
Lead (Pb)	1,000	mg/kg	2	23	410923#
Mercury (Hg)	1,000	mg/kg	2	ND	ND
Hexavalent Chromium (CrVI)	1,000	mg/kg	2	ND	ND
Sum of PBBs	1,000	mg/kg	-	ND	ND
Monobromobiphenyl	-	mg/kg	5	ND	ND
Dibromobiphenyl	-	mg/kg	5	ND	ND
Tribromobiphenyl	-	mg/kg	5	ND	ND
Tetrabromobiphenyl	-	mg/kg	5	ND	ND
Pentabromobiphenyl	-	mg/kg	5	ND	ND
Hexabromobiphenyl	-	mg/kg	5	ND	ND
Heptabromobiphenyl	-	mg/kg	5	ND	ND
Octabromobiphenyl	-	mg/kg	5	ND	ND



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Test Item(s)	Limit	Unit	MDL	001	002
Nonabromobiphenyl	-	mg/kg	5	ND	ND
Decabromobiphenyl	-	mg/kg	5	ND	ND
Sum of PBDEs	1,000	mg/kg	-	ND	ND
Monobromodiphenyl ether	-	mg/kg	5	ND	ND
Dibromodiphenyl ether	-	mg/kg	5	ND	ND
Tribromodiphenyl ether	-	mg/kg	5	ND	ND
Tetrabromodiphenyl ether	-	mg/kg	5	ND	ND
Pentabromodiphenyl ether	-	mg/kg	5	ND	ND
Hexabromodiphenyl ether	-	mg/kg	5	ND	ND
Heptabromodiphenyl ether	-	mg/kg	5	ND	ND
Octabromodiphenyl ether	-	mg/kg	5	ND	ND
Nonabromodiphenyl ether	-	mg/kg	5	ND	ND
Decabromodiphenyl ether	-	mg/kg	5	ND	ND

Notes :

- (1)The maximum permissible limit is quoted from the GB/T26572-2011 .
- (2) # :Exceed the limit.
- (3) The sample(s) 002 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.

Test Item(s)	Limit	Unit	MDL	003	004	005
Cadmium (Cd)	100	mg/kg	2	ND	ND	ND
Lead (Pb)	1,000	mg/kg	2	30	ND	1628#
Mercury (Hg)	1,000	mg/kg	2	ND	ND	ND
Hexavalent Chromium (CrVI)	-	-	◇	Negative	Negative	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:



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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.

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.

(3) # :Exceed the limit.

Remark: Results & photo(s) of this report refer to test report CKGEC2200698503 .

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.

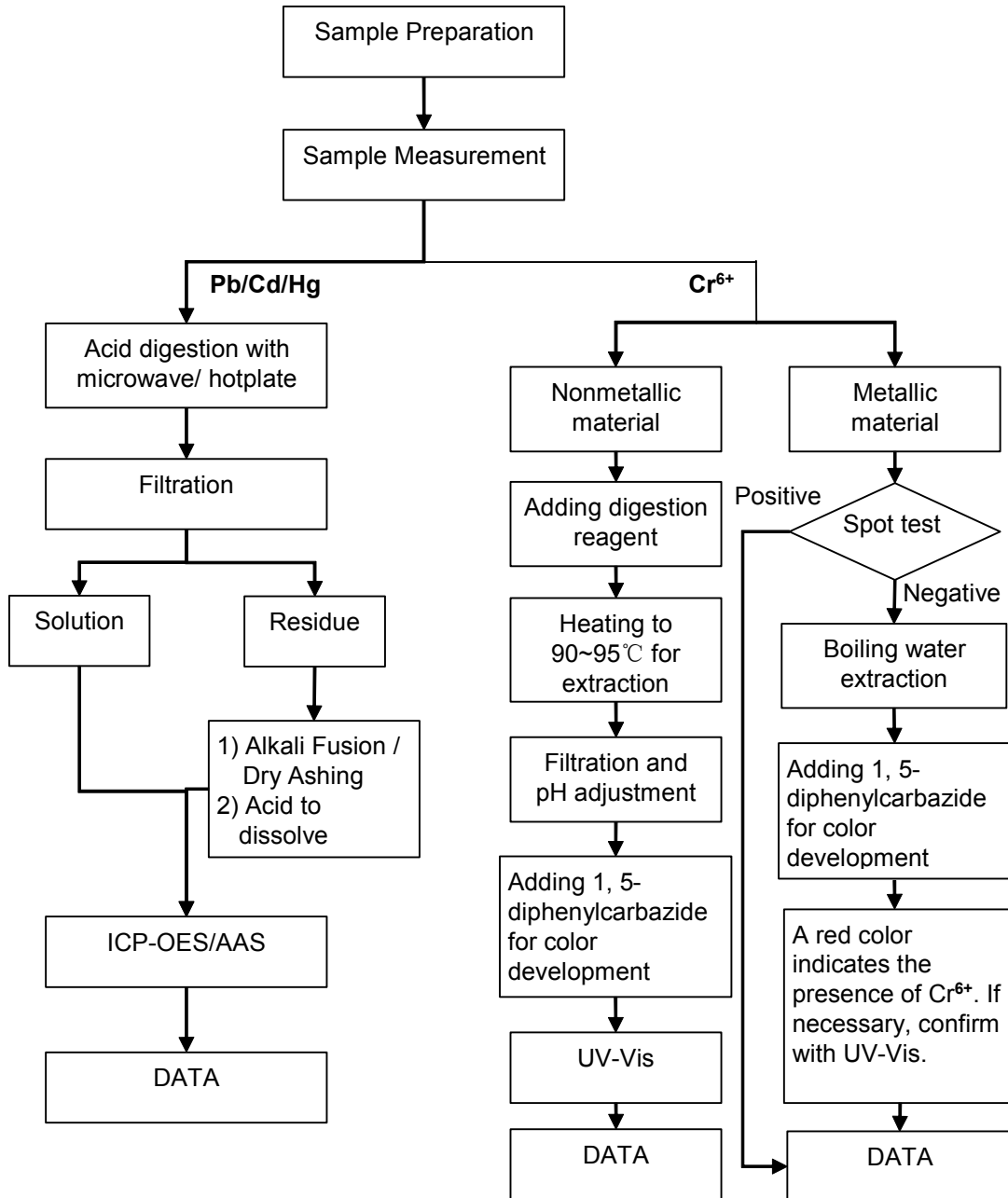


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Pb/Cd/Hg/Cr6+ Testing Flow Chart

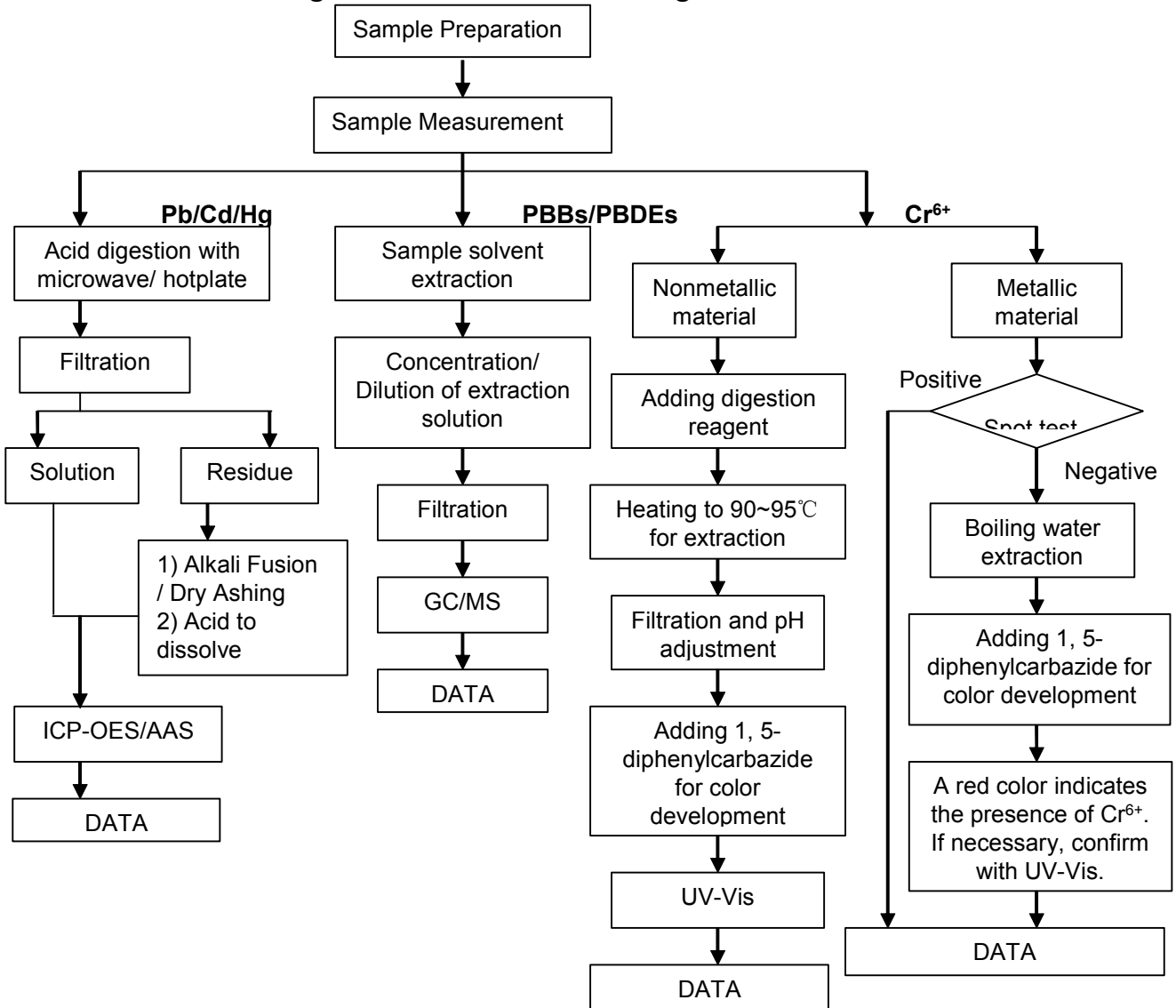


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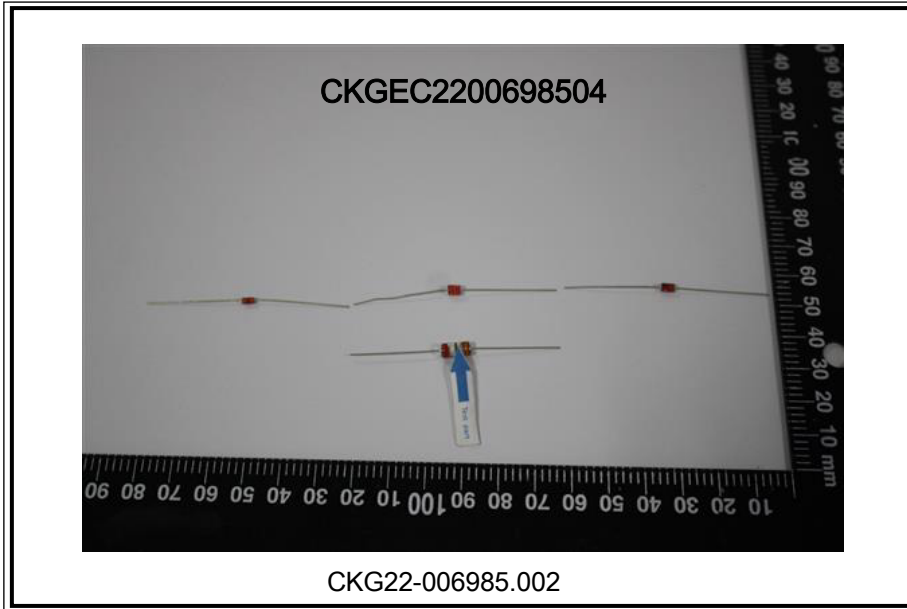
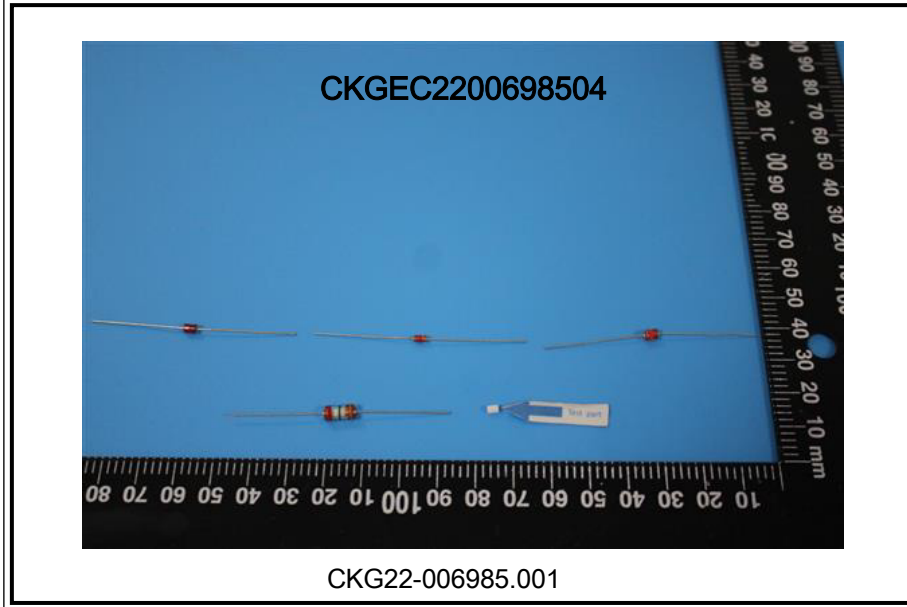
Pb/Cd/Hg/Cr6+/PBBs/PBDEs Testing Flow Chart



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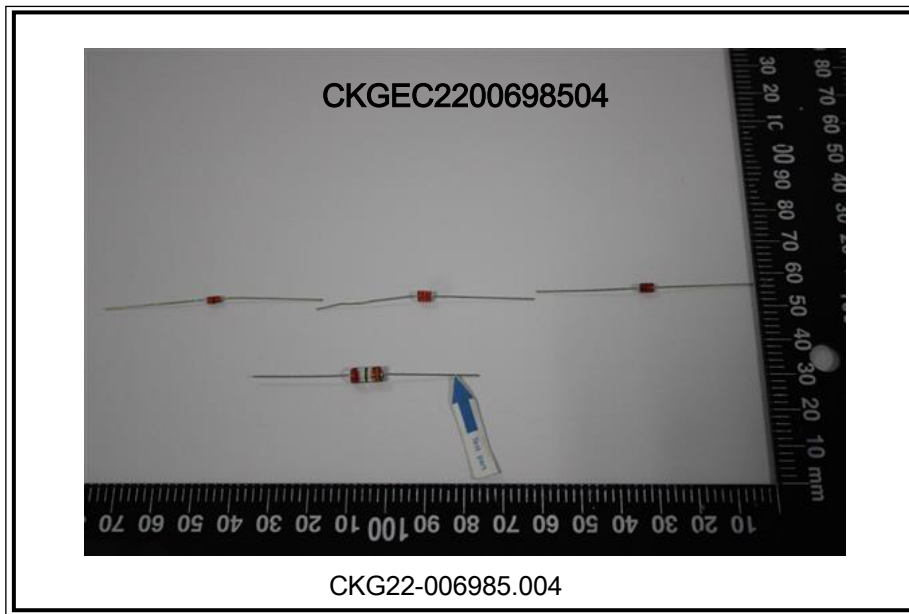
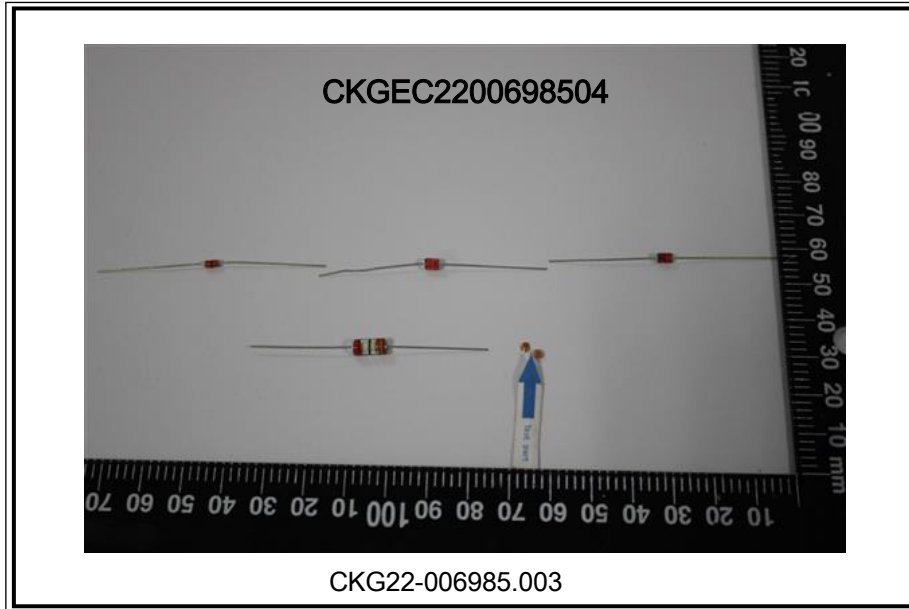
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Sample photo:



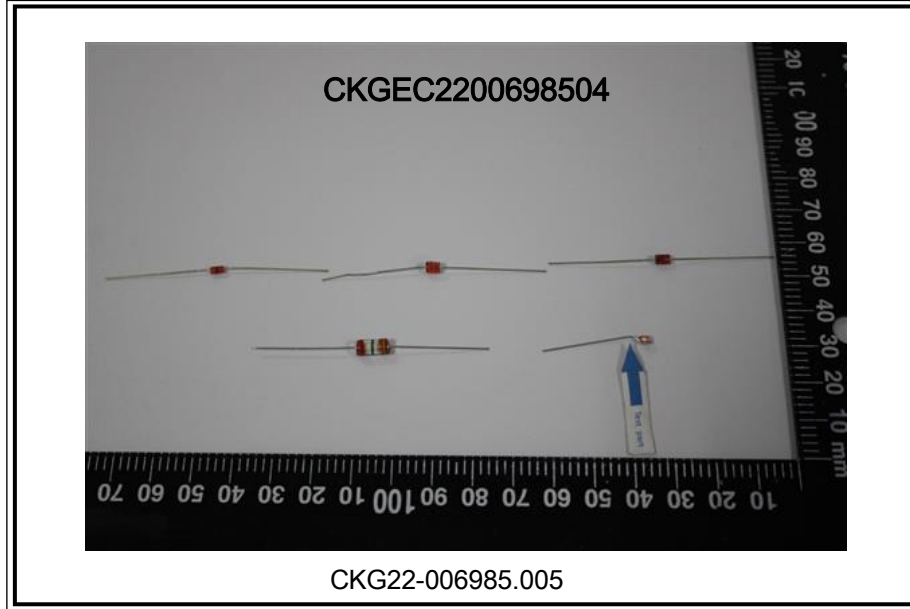
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