

Test Report

No.: CANEC23014615205

Date: Nov 29, 2023

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Client Name: SHENZHEN TITAN MICRO ELECTRONICS CO.,LTD.

Client Address: 10th Floor,Bldg A,Unis Inforport,High-Tech Industrial Park,Shenzhen,P.R.C

Sample Name: Integrated Circuit

Model No.: SOP-16-150

Client Ref. Information: SOP-8-150/ESOP-8-150/SOP-8-300/SOP-14-150/SOP-16-150/ESOP-16-300/SOP-18-300/SOP-20-300/SOP-24-300/SOP-28-300/SOP-32-300/SSOP-10-150/ESSOP-10-150/SSOP-16-150/QSOP-24-150/SSOP-24-206/SSOP-24-240/SSOP-28-150/SSOP-36-300/SSOP-48-300/TSSOP-16-150/TSSOP-20-150/SOT23/SOT89/TO-252/LQFP-32-07x07/LQFP-44-07x07/LQFP-48-07x07/LQFP-64-07x07/LQFP-52-14x14/LQFP-64-14x14/DIP-6-300/DIP-7-300/DIP-8-300/SDIP-24-300/QFN-24-4.0x4.0/QFN-40-5.0x5.0/QFN-32-5.0x5.0/DFN-6-2.0x2.0

Manufacturer: GUANGXI TITAN MICRO ELECTRONICS CO.,LTD

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

SGS Job No.: XMP23-001818

Sample Receiving Date: Nov 21, 2023

Testing Period: Nov 21, 2023 ~ Nov 29, 2023

Test Requested: Select 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).

Test Requirement	Conclusion
EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU- Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP)	Pass
EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU- Lead, Mercury, Cadmium and Hexavalent chromium	Pass

Signed for and on behalf of
SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch

Jany Zhong

Jany Zhong
Approved Signatory

scan to see the report



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SGS-CSTC Standards Technical Services Co., Ltd.
Guangzhou Branch Technical Laboratory

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Test Result(s):

Test Part Description:

SN ID	Sample No.	SGS Sample ID	Description
SN1	A1	CAN23-0146152-0001.C001	Black "body" with brown printing
SN2	A2	CAN23-0146152-0001.C002	Silver-gray metal pin

Remarks:

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

EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU- Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP)

Test Method: With reference to IEC 62321-4:2013+AMD1:2017, IEC 62321-5:2013, IEC 62321-7-2:2017, IEC 62321-6:2015 and IEC 62321-8:2017, analysis was performed by ICP-OES, UV-Vis and GC-MS.

Test Item(s)	Limit	Unit(s)	MDL	A1
Cadmium (Cd)	100	mg/kg	2	ND
Lead (Pb)	1000	mg/kg	2	ND
Mercury (Hg)	1000	mg/kg	2	ND
Hexavalent Chromium (Cr(VI))	1000	mg/kg	8	ND
Polybromobiphenyl (PBBs)	1000	mg/kg	-	ND
Monobromobiphenyl (MonoBB)	-	mg/kg	5	ND
Dibromobiphenyl (DiBB)	-	mg/kg	5	ND
Tribromobiphenyl (TriBB)	-	mg/kg	5	ND
Tetrabromobiphenyl (TetraBB)	-	mg/kg	5	ND
Pentabromobiphenyl (PentaBB)	-	mg/kg	5	ND
Hexabromobiphenyl (HexaBB)	-	mg/kg	5	ND
Heptabromobiphenyl (HeptaBB)	-	mg/kg	5	ND
Octabromobiphenyl (OctaBB)	-	mg/kg	5	ND
Nonabromobiphenyl (NonaBB)	-	mg/kg	5	ND
Decabromobiphenyl (DecaBB)	-	mg/kg	5	ND
Polybromodiphenyl ether (PBDEs)	1000	mg/kg	-	ND
Monobromodiphenylether (MonoBDE)	-	mg/kg	5	ND
Dibromodiphenylether (DiBDE)	-	mg/kg	5	ND
Tribromodiphenylether (TriBDE)	-	mg/kg	5	ND
Tetrabromodiphenylether (TetraBDE)	-	mg/kg	5	ND
Pentabromodiphenylether (PentaBDE)	-	mg/kg	5	ND
Hexabromodiphenylether (HexaBDE)	-	mg/kg	5	ND
Heptabromodiphenylether (HeptaBDE)	-	mg/kg	5	ND
Octabromodiphenylether (OctaBDE)	-	mg/kg	5	ND
Nonabromodiphenylether (NonaBDE)	-	mg/kg	5	ND
Decabromodiphenylether (DecaBDE)	-	mg/kg	5	ND
Dibutyl Phthalate (DBP)	1000	mg/kg	50	ND



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Test Item(s)	Limit	Unit(s)	MDL	A1
Benzyl Butyl Phthalate(BBP)	1000	mg/kg	50	ND
Bis-(2-ethylhexyl) Phthalate(DEHP)	1000	mg/kg	50	ND
Diisobutyl Phthalate(DIBP)	1000	mg/kg	50	ND

Notes:

- (1) The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863.
- (2) IEC 62321 series is equivalent to EN 62321 series.
- (3) The restriction of DEHP, BBP, DBP and DIBP shall apply to medical devices, including in vitro medical devices, and monitoring and control instruments, including industrial monitoring and control instruments, from 22 July 2021.

EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU- Lead, Mercury, Cadmium and Hexavalent chromium

Test Method: With reference to IEC 62321-4:2013+AMD1:2017, IEC 62321-5:2013 and IEC 62321-7-1:2015, analysis was performed by ICP-OES and UV-Vis .

Test Item(s)	Limit	Unit(s)	MDL	A2
Cadmium(Cd)	100	mg/kg	2	ND
Lead(Pb)	1000	mg/kg	2	8
Mercury(Hg)	1000	mg/kg	2	ND
Hexavalent Chromium (Cr(VI)) ▼	-	µg/cm²	0.10	ND

Notes:

- (1) The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863.
- (2) IEC 62321 series is equivalent to EN 62321 series.
- (3) ▼ =
 - a. The sample is positive for Cr(VI) if the Cr(VI) concentration is greater than 0.13 µg/cm². The sample coating is considered to contain Cr(VI)
 - b. The sample is negative for Cr(VI) if Cr(VI) is ND (concentration less than 0.10 µg/cm²). The coating is considered a non-Cr(VI) based coating
 - c. The result between 0.10 µg/cm² and 0.13 µg/cm² is considered to be inconclusive-unavoidable coating variations may influence the determination.

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

Remark: Results & photo(s) of this report refer to test report CANEC23014615201.

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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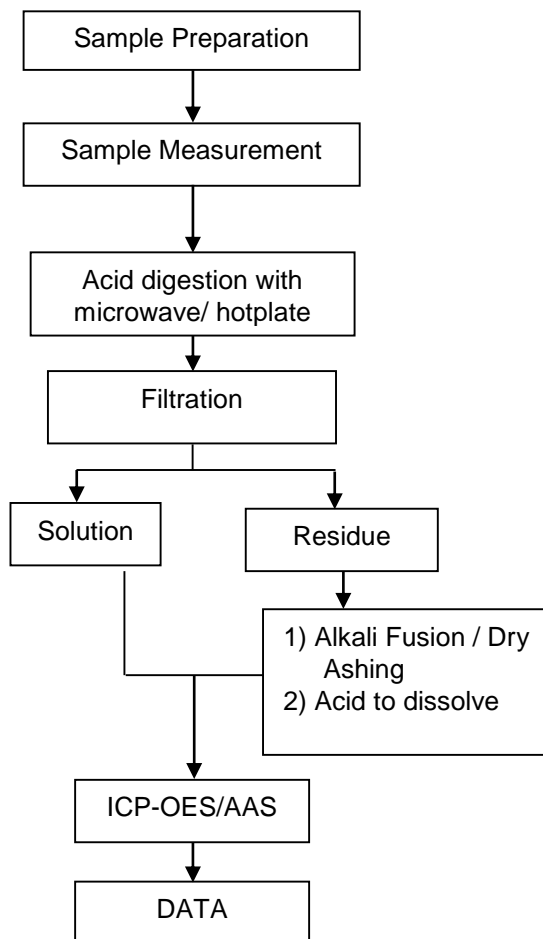
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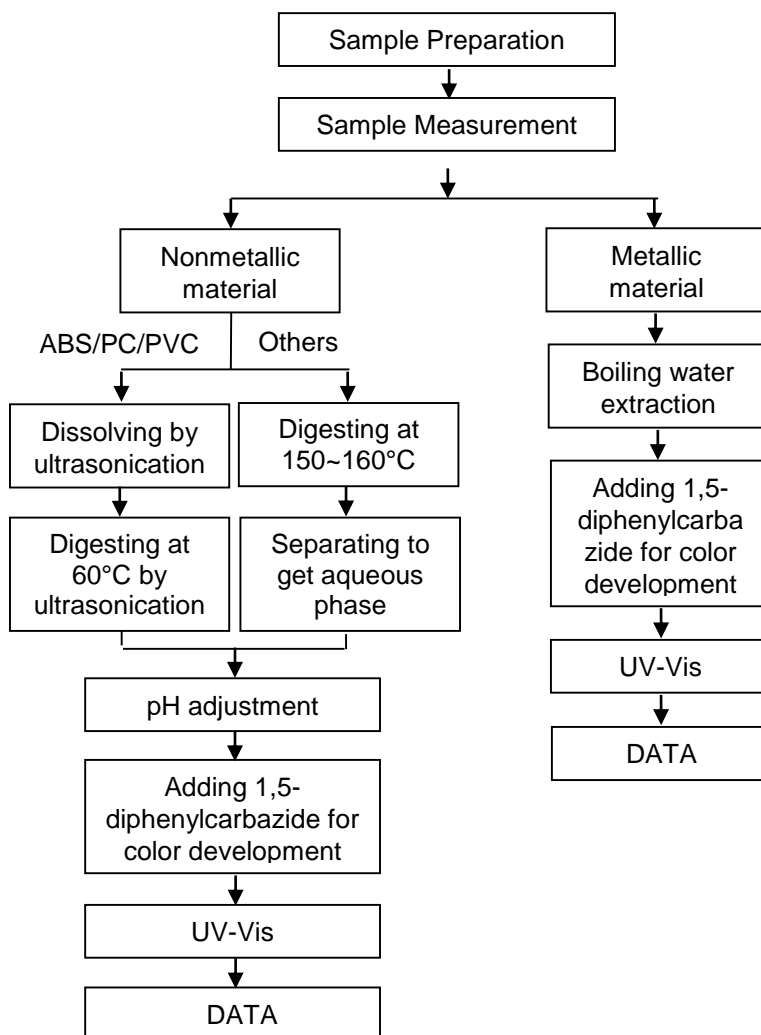
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Elements Testing Flow Chart

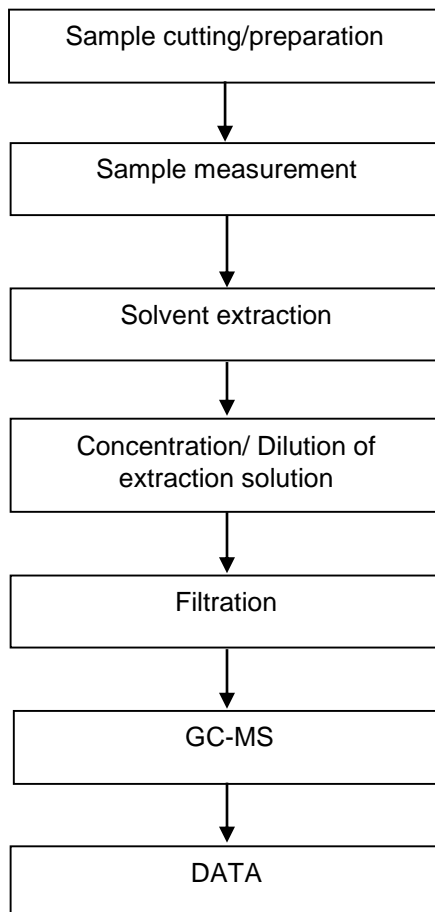
These samples were dissolved totally by pre-conditioning method according to below flow chart.



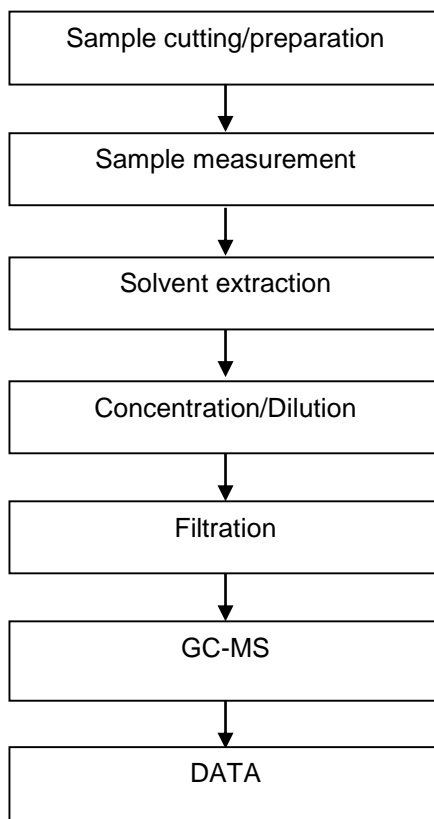
Hexavalent Chromium (Cr(VI)) Testing Flow Chart



PBBs/PBDEs Testing Flow Chart



Phthalates Testing Flow Chart



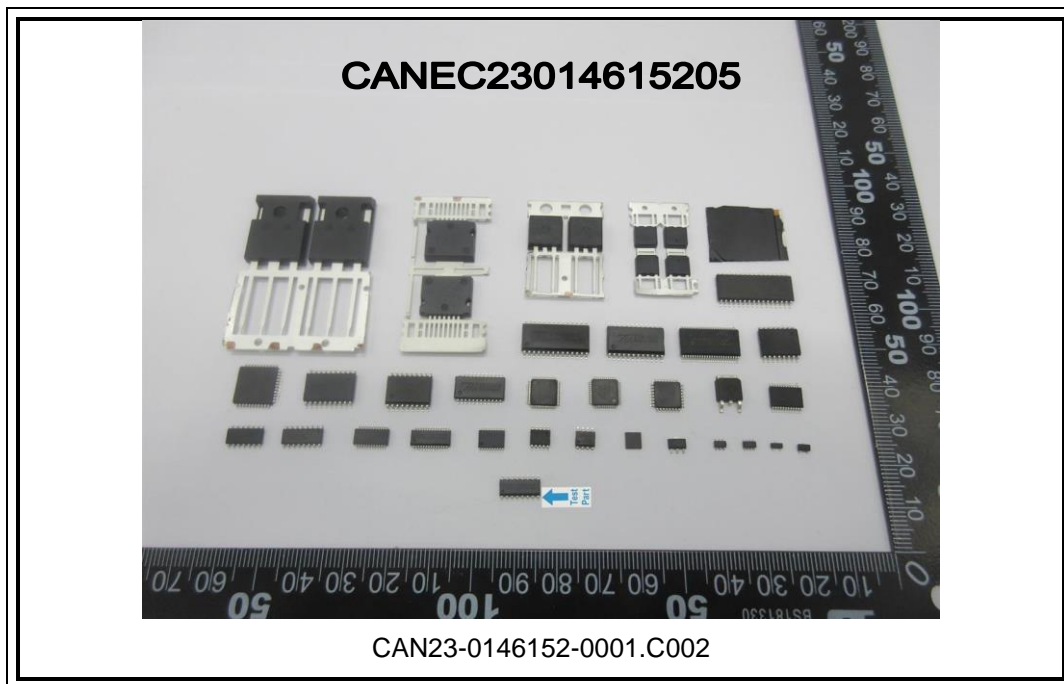
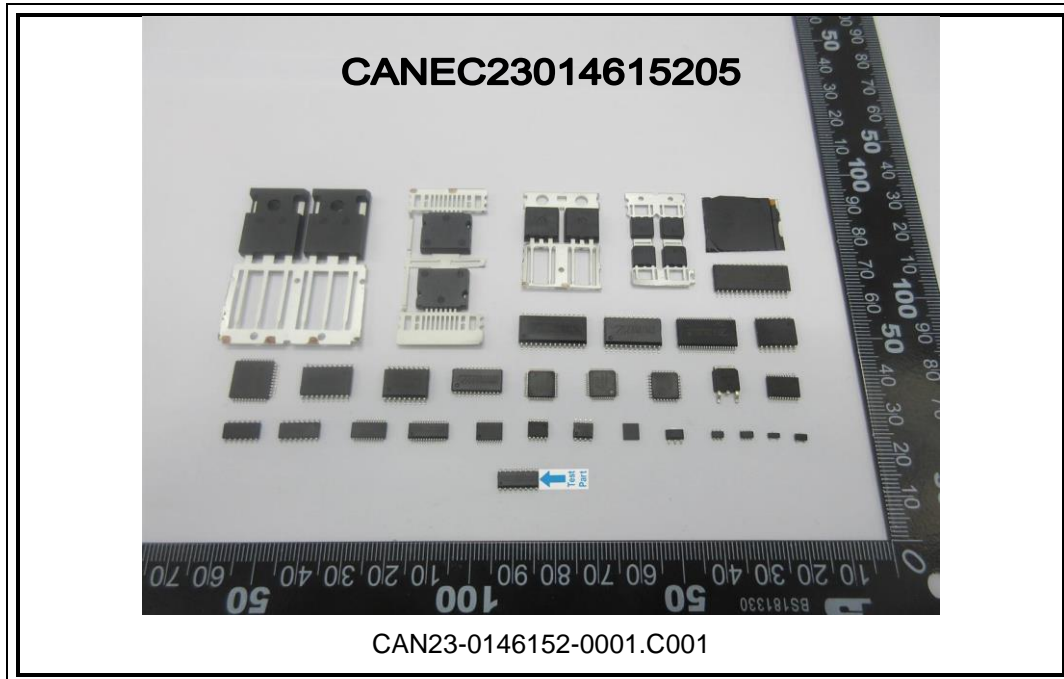
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Sample Photo:



SGS authenticate the photo on original report only

*** End of Report ***



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