

**Test Report** No.: SHAEC24015145501 **Date**: Jul 15, 2024 Page 1 of 11

Client Name: Jiangsu JieJie Microelectronics Co.,Ltd.

Client Address: 3000 Qiantangjiang Road, Economic Development Zone, Qidong, Jiangsu, China

Sample Name: SOP-8 Model No.: SOP-8

Client Ref. Information: 2510 、0402 、0603 、DFN0603-2L 、DFN1006-2L 、DFN1006-3L 、

DFN10x15-5L 、DFN10x15-5L-XX 、DFN1610-2L 、DFN1610-6L 、

DFN2010-5L、DFN2010-8L、DFN2020-2L、DFN2020-3L、DFN2020-6L、DFN2020-6L-XX、DFN2020-8L、DFN2510-10L、DFN2626-10L、DFN2x2-3L、DFN2x2-6L、DFN2x2-6L-XX、DFN3.0x3.0-8L、DFN3.3x3.3-8L、DFN3.3x3.3-8L-XX、DFN3020-10L、DFN3030-8L、DFN3030-8L-XX、DFN3030-12L、DFN3333-2L、DFN3333-8L、DFN3810-9L、DFN3x3-8L-XX、DFN4120-10L、DFN5060-8L、DFN5060-8L-XX、DFN5515-18L、DFN5x6-8L(Dual)、DFN5x6-8L-XX、DFN8080-2L、DFN8080-4L、

DFN5x6-8L(Duai) \ DFN5x6-8L-XX \ DFN8080-2L \ DFN8080-4L \
DFN8x8-2L \ DFN8x8-4L-XX \ DIP-5 \ DriveJM-34 \ DriveJM-62 \ DriveJM-DC \ DriveJM-E1 \ DriveJM-E2 \ DriveJM-EC \ DriveJM-ED \ DriveJM-H1 \
DriveJM-H2 \ FBP-02C-A \ IGBT-34mm \ LSOP-4 \ PDFN3.3x3.3-8L \
PDFN3x3-8L \ PDFN3x3-8L-XX \ PDFN5x6-8L \ PDFN5x6-8L-XX \
PowerJE10x12 \ PowerJE5x6 \ PowerJE7x8 \ PowerJE8x8 \ PPTC \
SGD0201 \ SGD0402 \ SMD-5 \ SOD-123 \ SOD-123FL \ SOD-123FLT \
SOD-323 \ SOD-323F \ SOD-323FL \ SOD-523 \ SOD-723 \ SOD-923 \
SOP-10 \ SOP-16 \ SOP-4 \ SOP-5 \ SOP-7 \ SOP-8 \ SOT-143 \ SOT-143-XX \ SOT-223 \ SOT-223-XX \ SOT-227 \ SOT-227-XX \ SOT-23 \
SOT-23-XX \ SOT-323 \ SOT-323-XX \ SOT-353-XX \ SOT-363-XX \ SOT-723 \ SOT-723-XX \ SOT-523-XX \ SOT-563 \ SOT-563-XX \ SOT-723 \ SOT-723-XX \ SOT-723 \ SOT-723-XX \ SOT-89-XX \ SOT-89R-XX \ SOP-16 \ SSOP-4 \ TO-252-XX \ TSSOP-8 \ WSOP-6

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

SGS Job No.: SHP24-022199
Sample Receiving Date: Jul 09, 2024

Testing Period: Jul 09, 2024 ~ Jul 15, 2024

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

Signed for and on behalf of

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.

Dora Hu

Approved Signatory

Dorathe





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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 (PBB), Polybrominated diphenyl ethers (PBDE), 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
Halogen	See Results
Polyvinyl chloride (PVC)	See Results

### Test Result(s):

Test Part Description:

SN ID	Sample No.	SGS Sample ID	Description
SN1	A1	SHA24-0151455-0001.C001	Black body
SN2	A2	SHA24-0151455-0001.C002	Silvery 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 (PBB), Polybrominated diphenyl ethers (PBDE), 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/AAS, UV-

Vis and GC-MS.

Test Item(s)	Limit	Unit(s)	MDL	A1
Lead (Pb)	1000	mg/kg	2	ND
Mercury (Hg)	1000	mg/kg	2	ND
Cadmium (Cd)	100	mg/kg	2	ND
Hexavalent Chromium (Cr(VI))	1000	mg/kg	8	ND
Polybromobiphenyl (PBB)	1000	mg/kg		ND
Monobrominated biphenyl (MonoBB)	-	mg/kg	5	ND
Dibrominated biphenyl (DiBB)	-	mg/kg	5	ND
Tribrominated biphenyl (TriBB)	-	mg/kg	5	ND
Tetrabrominated biphenyl (TetraBB)	-	mg/kg	5	ND
Pentabrominated biphenyl (PentaBB)	-	mg/kg	5	ND
Hexabrominated biphenyl (HexaBB)	-	mg/kg	5	ND
Heptabrominated biphenyl (HeptaBB)	-	mg/kg	5	ND
Octabrominated biphenyl (OctaBB)	-	mg/kg	5	ND



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Test Item(s)	Limit	Unit(s)	MDL	A1
Nonabrominated biphenyl (NonaBB)	-	mg/kg	5	ND
Decabrominated biphenyl (DecaBB)	-	mg/kg	5	ND
Polybromodiphenyl ether(PBDE)	1000	mg/kg	ı	ND
Monobrominated diphenyl ether (MonoBDE)	-	mg/kg	5	ND
Dibrominated diphenyl ether (DiBDE)	-	mg/kg	5	ND
Tribrominated diphenyl ether (TriBDE)	-	mg/kg	5	ND
Tetrabrominated diphenyl ether (TetraBDE)	-	mg/kg	5	ND
Pentabrominated diphenyl ether (PentaBDE)	-	mg/kg	5	ND
Hexabrominated diphenyl ether (HexaBDE)	-	mg/kg	5	ND
Heptabrominated diphenyl ether (HeptaBDE)	-	mg/kg	5	ND
Octabrominated diphenyl ether (OctaBDE)	-	mg/kg	5	ND
Nonabrominated diphenyl ether (NonaBDE)	-	mg/kg	5	ND
Decabrominated diphenyl ether (DecaBDE)	-	mg/kg	5	ND
Bis(2-ethylhexyl) phthalate (DEHP)	1000	mg/kg	50	ND
Butyl benzyl phthalate (BBP)	1000	mg/kg	50	ND
Dibutyl phthalate (DBP)	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**

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

Test Item(s)	Limit	Unit(s)	MDL	A2
Lead (Pb)	1000	mg/kg	2	6
Mercury (Hg)	1000	mg/kg	2	ND
Cadmium (Cd)	100	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/cm<sup>2</sup>. The sample coating is considered to contain Cr(VI).



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- 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.

### Halogen

**Test Method:** With reference to EN 14582:2016, analysis was performed by IC.

Test Item(s)	Unit(s)	MDL	A1
Fluorine(F)	mg/kg	20	ND
Chlorine(CI)	mg/kg	50	ND
Bromine(Br)	mg/kg	50	ND
Iodine(I)	mg/kg	50	ND

### Polyvinyl chloride (PVC)

**Test Method:** With reference to SGS in house method, analysis was performed by FTIR/HATR.

Test Item(s)	A1
Polyvinyl chloride (PVC)	Negative

### Notes:

(1) Negative=Undetectable, Positive=Detectable

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.



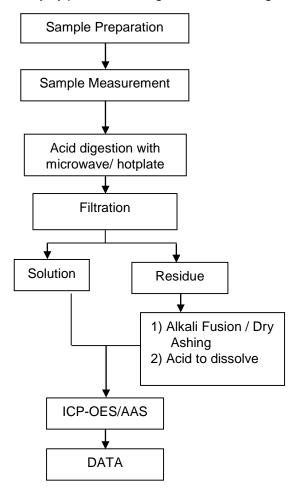
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### **Elements Testing Flow Chart**

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





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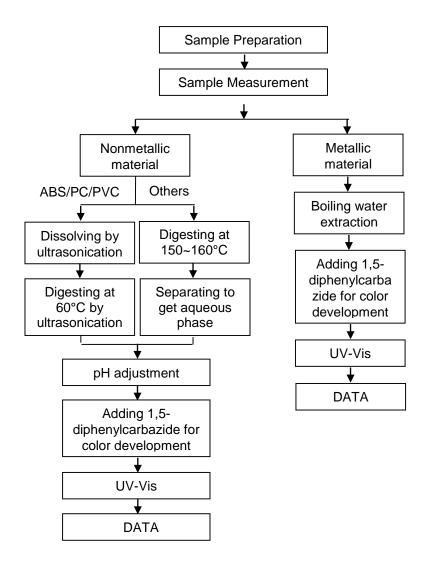
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## Hexavalent Chromium (Cr(VI)) Testing Flow Chart





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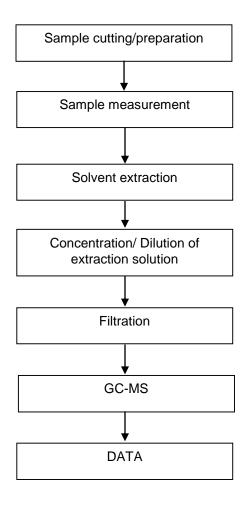
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### **PBB/PBDE Testing Flow Chart**





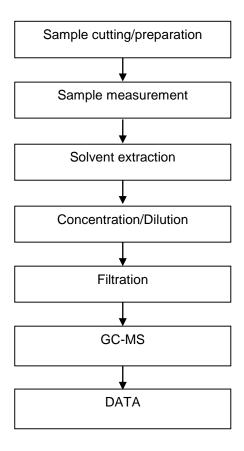
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### **Phthalates Testing Flow Chart**





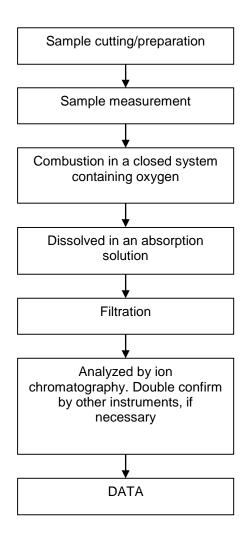
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### **Halogen Testing Flow Chart**





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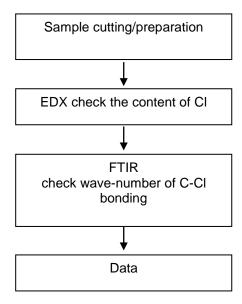
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### **PVC Testing Flow Chart**





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Sample Photo:





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