

Test Report

No.: SHAEC23008339605

Date: Jul 04, 2023

Page 1 of 7

Client Name: Jiangsu JieJie Microelectronics Co.,Ltd.

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

Sample Name: TO-220A

Client Ref. Information: See the attachment

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

SGS Job No.: SHP23-005036

Sample Receiving Date: Jun 15, 2023

Testing Period: Jun 15, 2023 ~ Jul 04, 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).

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

Tom Ni

Tom Ni
Approved Signatory

scan to see the report



A1854CCC



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Testing Center - China

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Test Result(s):

Test Part Description:

SN ID	Sample No.	SGS Sample ID	Description
SN1	A1	SHA23-0083396-0001.C001	Black solid

Remarks:

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

European Regulation POPs (EU) 2019/1021 and its amendments - Persistent organic pollutants (POPs)

Test Method: With reference to SGS In-House method , analysis was performed by GC-MS,GC-ECD, HPLC-DAD-MS.

Test Item(s)	CAS No.	Limit	Unit(s)	MDL	A1
Hexachlorobutadiene	87-68-3	Banned	mg/kg	5	ND
Pentachlorobenzene	608-93-5	Banned	mg/kg	5	ND
Hexachlorobenzene	118-74-1	10	mg/kg	5	ND
Polychlorinated biphenyls (PCB)	1336-36-3 and others	Banned	mg/kg	5	ND
Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified (α-HBCDD, β-HBCDD, γ-HBCDD)	134237-50-6 /134237-51-7 /134237-52-8 /25637-99-4 /3194-55-6	100	mg/kg	10	ND
Polychlorinated naphthalenes (PCN)	70776-03-3 and others	Banned	mg/kg	5	ND
Pentachlorophenol(PCP), its salts and esters	87-86-5 and others	5	mg/kg	0.5	ND
Hexabromodiphenyl (HexaBB)	36355-01-8	Banned	mg/kg	5	ND
Tetrabromodiphenylether(TetraBDE)	40088-47-9 and others	10	mg/kg	5	ND
Pentabromodiphenyl ethers (PentaBDE)	32534-81-9 and others	10	mg/kg	5	ND
Hexabromodiphenylether(HexaBDE)	36483-60-0 and others	10	mg/kg	5	ND
Heptabromodiphenylether (HeptaBDE)	68928-80-3 and others	10	mg/kg	5	ND
Decabromodiphenyl ether (DecaBDE)	1163-19-5	10	mg/kg	5	ND
Alkanes, C10-13, chloro(short chain-chlorinated paraffins) (SCCPs)	85535-84-8 and others	1	%	0.005	ND
Perfluorooctane sulfonates (PFOS) and its derivatives	-	10	mg/kg	-	ND
Perfluorooctane sulfonates (PFOS) ^	1763-23-1	-	mg/kg	1	ND
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	-	mg/kg	1	ND



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Test Report

No.: SHAEC23008339605

Date: Jul 04, 2023

Page 3 of 7

Test Item(s)	CAS No.	Limit	Unit(s)	MDL	A1
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	-	mg/kg	1	ND
2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol (EtFOSE)	1691-99-2	-	mg/kg	1	ND
2-(N-methylperfluoro-1-octanesulfonamido)-ethanol (MeFOSE)	24448-09-7	-	mg/kg	1	ND
Perfluorooctane sulfonamide (PFOSA)	754-91-6	-	mg/kg	1	ND
Perfluorooctanoic Acid (PFOA) and its salts+	335-67-1	0.025	mg/kg	0.025	ND
PFOA Related Substances	-	1	mg/kg	-	ND
1H,1H,2H,2H-Perfluoro-1-decanol (8:2 FTS)	39108-34-4	-	mg/kg	0.2	ND
Methyl perfluorooctanoate (Me-PFOA)	376-27-2	-	mg/kg	0.2	ND
Ethyl perfluorooctanoate (Et-PFOA)	3108-24-5	-	mg/kg	0.2	ND
1H,1H,2H,2H-Perfluoro-1-decanol (8:2 FTOH)	678-39-7	-	mg/kg	0.2	ND
1H,1H,2H,2H-Perfluorodecyl acrylate (8:2 FTA)	27905-45-9	-	mg/kg	0.2	ND
1H,1H,2H,2H-Perfluorodecyl methacrylate (8:2 FTMA)	1996-88-9	-	mg/kg	0.2	ND
Perfluoro-1-iodooctane (PFOI)	507-63-1	-	mg/kg	0.2	ND

Notes:

- (1) Substances in Annex I of European Regulation POPs (EU) 2019/1021 are prohibited in preparations and constituents of articles unless otherwise specified.
- (2) The chemical analysis of substances is performed by means of currently available analytical techniques against substances laid down in Test Requested.
- (3) Detected substance(s) may come from one or more components in composite testing. Client is suggested to identify the component(s) and the exact concentration of the substance(s) by requesting further quantitative analysis from the laboratory.
- (4) Exemption: Alkanes C10-13, chloro (short chain-chlorinated paraffins) (SCCPs) < 1.0% in preparation, <0.15% for articles.
- (5) Exemptions: HBCDD, No more than 100 mg/kg as an unintentional trace contaminant in substances, mixtures, articles or flame-retarded parts of articles.
- (6) Exemptions: Perfluorooctane sulfonates (PFOS) and its derivatives (acid, metal salt, halide, amide, and other derivatives including polymers) ≤ 10 mg/kg for preparations, < 0.1% (w/w) for articles and < 1 ug/m² for textiles and coated materials.
- (7) ^ PFOS including PFOS-K (CAS No.: 2795-39-3), PFOS-Li (CAS No.: 29457-72-5), PFOS-NH₄ (CAS No.: 29081-56-9), PFOS-NH(OH)₂ (CAS No.: 70225-14-8), PFOS-N(C₂H₅)₄ (CAS No.: 56773-42-3), PFOS-DDA (CAS No.: 251099-16-8) and POSF (CAS No.: 307-35-7).
- (8) + PFOA and its salts including PFOA-Na (CAS No.: 335-95-5), PFOA-K (CAS No.: 2395-00-8), PFOA-Ag (CAS No.: 335-93-3), PFOA-F (CAS No.: 335-66-0) and APFO (CAS No.: 3825-26-1).
- (9) Exemptions: Tetrabromodiphenyl ether, pentabromodiphenyl ether, hexabromodiphenyl ether, heptabromodiphenyl ether and decabromodiphenyl ether are ≤ 10 mg/kg for substances, and Sum of tetra-



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Test Report

No.: SHAEC23008339605

Date: Jul 04, 2023

Page 4 of 7

penta-, hexa-, hepta- and decaBDE ≤ 500 mg/kg for mixtures or articles, this restriction is subject to subject to review and assessment by the European by 16 July 2021.

(10) Exemption: Tetrabromodiphenyl ether, pentabromodiphenyl ether, hexabromodiphenyl ether, heptabromodiphenyl ether and decabromodiphenyl ether in electrical and electronic equipment within the scope of Directive 2011/65/EU are exempted.

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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Test Report

No.: SHAEC23008339605

Date: Jul 04, 2023

Page 5 of 7

Attachment:

402、603、2510、62mm、ABS、DBS、DFN0603-2L、DFN0603-2L、DFN1006-2L、DFN1006-2L、DFN1006-3L、DFN1006-3L、DFN10x15-5L、DFN10x15-5L-XX、DFN10x15-5L-XX、DFN1610-2L、DFN1610-2L、DFN1610-6L、DFN1610-6L、DFN2010-5L、DFN2010-5L、DFN2010-8L、DFN2010-8L、DFN2020-2L、DFN2020-2L、DFN2020-3L、DFN2020-3L、DFN2020-6L、DFN2020-6L、DFN2020-6L-XX、DFN2020-6L-XX、DFN2020-8L、DFN2510-10L、DFN2510-10L、DFN2626-10L、DFN2626-10L、DFN2x2-3L、DFN2x2-3L、DFN2x2-6L、DFN2x2-6L、DFN2x2-6L-D、DFN2x2-6L-XX、DFN3.0x3.0-8L、DFN3.0x3.0-8L-SD (Type、B) DFN3.3x3.3-8L-XX、DFN3.0x3.0-8L-XX、DFN3.3x3.3-8L、DFN3.3x3.3-8L、DFN3.3x3.3-8L (Type、B)、DFN3.3x3.3-8L-XX、DFN3020-10L、DFN3020-10L、DFN3030-8L、DFN3030-8L、DFN3030-8L-XX、DFN3030-8L-XX、DFN3030-12L、DFN3333-2L、DFN3333-2L、DFN3333-8L、DFN3333-8L、DFN3810-9L、DFN3810-9L、DFN3x3-8L-XX、DFN3x3-8L-XX、DFN4120-10L、DFN5060-8L、DFN5060-8L、DFN5060-8L-XX、DFN5060-8L-XX、DFN5515-18L、DFN5x6-8L、DFN5x6-8L(Dual)、DFN5x6-8L-XX、DFN5x6-8L-XX、DFN8080-2L、DFN8080-2L、DFN8080-4L、DFN8080-4L、DFN8x8-2L、DFN8x8-2L、DFN8x8-4L、DFN8x8-4L-XX、DIP-4、DO-15、DO-218AB、DO-27、DO-41、DriveJM-34、DriveJM-62、DriveJM-DC、DriveJM-E1、DriveJM-E2、DriveJM-EC、DriveJM-ED、DriveJM-H1、DriveJM-H2、EasyPack1B、EconoDual、FBP-02C-A、GBJ、GBL、GBU、ITO-247、ITO-247-XX、KBL、KBP、LSOP-4、LSOP-4、MBF、MBS、PDFN3.3x3.3-8L、PDFN3.3x3.3-8L、PDFN3.3x3.3-8L-XX、PDFN3x3-8L、PDFN3x3-8L、PDFN3x3-8L-XX、PDFN3x3-8L-XX、PDFN5x6-8L、PDFN5x6-8L、PDFN5x6-8L-XX、PDFN5x6-8L-XX、PowerJE10x12、PowerJE10x12、PowerJE5x6、PowerJE5x6、PowerJE7x8、PowerJE7x8、PowerJE8x8、PowerJE8x8、PPTC、PPTC、R6、SGBJ、SGD0201、SGD0402、SMA、SMAF、SMB、SMBF、SMC、SMC-3、SMD-3225、SMD-4032、SMT、SMT-4、SMTF、SMTJ、SMTO-218Tab、SOD-123、SOD-123、SOD-123FL、SOD-123FL、SOD-123FLT、SOD-123FLT、SOD-323、SOD-323、SOD-323F、SOD-323FL、SOD-323FL、SOD-523、SOD-523、SOD-723、SOD-723、SOD-923、SOD-923、SOP-10、SOP-10、SOP-16、SOP-16、SOP-4、SOP-4、SOP-5、SOP-5、SOP-7、SOP-7、SOP-8、SOP-8、SOT-143、SOT-143-XX、SOT-143-XX、SOT-223、SOT-223、SOT-223-XX、SOT-223-XX、SOT-227、SOT-227、SOT-227-XX、SOT-227-XX、SOT-23、SOT-23、SOT-23-XX、SOT-23-XX、SOT-323、SOT-323-XX、SOT-323-XX、SOT-353、SOT-353-XX、SOT-353-XX、SOT-363、SOT-363-XX、SOT-363-XX、SOT-523、SOT-523-XX、SOT-523-XX、SOT-563、SOT-563-XX、SOT-563-XX、SOT-723、SOT-723-XX、SOT-723-XX、SOT-82、SOT-82、SOT-89、SOT-89-XX、SOT-89-XX、SOT-89-XX、SOT-89-XX、SSOP-16、SSOP-4、SSOP-4、STOLL7x8-5L、TO-126、TO-202、TO-202-XX、TO-220A、TO-220A-2D-XX、TO-220AB、TO-220A-XX、TO-220B、TO-220B-XX、TO-220C、TO-220C-XX、TO-220F、TO-220FA、TO-220FA-XX、TO-220FP、TO-220FP-XX、TO-220HF、TO-220H-XX、TO-220-XX、TO-247、TO-247-XX、TO-247iPS-2L、TO-247iPS-3L、TO-247J、TO-247J-XX、TO-247plus、TO-247S、TO-247S-XX、TO-247-XX、TO-251、TO-251L-XX、TO-251S、TO-251-XX、TO-252、TO-252-XX、TO-262、TO-262-XX、TO-263、TO-263-XX、



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Test Report

No.: SHAEC23008339605

Date: Jul 04, 2023

Page 6 of 7

TO-277B、TO-3P、TO-3P-3L、TO-3PF-3L、TO-92、TO-92CR、TO-92KR、TO-92KRF、TO-92UR、TO-92-XX、TOLL9.9x10.38-8L、TSSOP-8、TSSOP-8、WSOP-6



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No.: SHAEC23008339605

Date: Jul 04, 2023

Page 7 of 7

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