

Test Report

No.: SZXEC25000839501

Date: Mar 24, 2025

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Client Name: GUANGDONG NIUHANG ELECTRONIC TECHNOLOGY CO., LTD

Client Address: 3RD FLOOR, BUILDING 1, NO.3 DAYUAN ROAD, ZHANGCUN, DONGCHENG STREET, DONGGUAN CITY, GUANGDONG PROVINCE

Sample Name: SemiconductorComponents

Model No.: SOD-323

Client Ref. Information: Please see attachment

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

SGS Job No.: SZP25-012274

Sample Receiving Date: Mar 18, 2025

Testing Period: Mar 18, 2025 ~ Mar 24, 2025

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 (PBB), Polybrominated diphenyl ethers (PBDE), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP)	Pass

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

Andy

Andy Ni
Approved Signatory

Scan to see the report



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Test Result(s):

Test Part Description:

SN ID	Sample No.	SGS Sample ID	Description
SN1	A1	SZX25-0008395-0001.C001	"SemiconductorComponents"

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 and IEC 62321-12:2023, 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
Polybrominated biphenyls (PBB)	1000	mg/kg	-	ND
Monobrominated biphenyl (MonoBB)	-	mg/kg	25	ND
Dibrominated biphenyl (DiBB)	-	mg/kg	25	ND
Tribrominated biphenyl (TriBB)	-	mg/kg	25	ND
Tetrabrominated biphenyl (TetraBB)	-	mg/kg	25	ND
Pentabrominated biphenyl (PentaBB)	-	mg/kg	25	ND
Hexabrominated biphenyl (HexaBB)	-	mg/kg	25	ND
Heptabrominated biphenyl (HeptaBB)	-	mg/kg	25	ND
Octabrominated biphenyl (OctaBB)	-	mg/kg	25	ND
Nonabrominated biphenyl (NonaBB)	-	mg/kg	25	ND
Decabrominated biphenyl (DecaBB)	-	mg/kg	25	ND
Polybrominated diphenyl ethers (PBDE)	1000	mg/kg	-	ND
Monobrominated diphenyl ether (MonoBDE)	-	mg/kg	25	ND
Dibrominated diphenyl ether (DiBDE)	-	mg/kg	25	ND
Tribrominated diphenyl ether (TriBDE)	-	mg/kg	25	ND
Tetrabrominated diphenyl ether (TetraBDE)	-	mg/kg	25	ND
Pentabrominated diphenyl ether (PentaBDE)	-	mg/kg	25	ND
Hexabrominated diphenyl ether (HexaBDE)	-	mg/kg	25	ND
Heptabrominated diphenyl ether (HeptaBDE)	-	mg/kg	25	ND



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Test Item(s)	Limit	Unit(s)	MDL	A1
Octabrominated diphenyl ether (OctaBDE)	-	mg/kg	25	ND
Nonabrominated diphenyl ether (NonaBDE)	-	mg/kg	25	ND
Decabrominated diphenyl ether (DecaBDE)	-	mg/kg	25	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.

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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Hexavalent Chromium (Cr(VI)) Testing Flow Chart



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PBB/PBDE/Phthalates Testing Flow Chart



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Attachment:
DIODE:

R-1, R-6, R-Series, A-405, DO-41, DO-15, DO-27(DO-201AD), DO-35, DO-201AC(SMA), DO-201AA(SMB), DO-201AB(SMC), DO-213AA, DO-213AB(LL-41), DO-218AB, DO-Series, TO-251, TO-251S, TO-252, PTO-252, TO-262, TO-263, TO-220AB, TO-220AC, TO-220C, TO-220C-2L, ITO-220AB, ITO-220AC, TO-220F, TO-220F-2L, TO-3P, TO-247, TO-247S, TO-277, TO-277A, TO-277B, TO-247, TO-247S, TO-3P, TO-3PS, TO-3PF, TO-264-3L, TO-264PLUS-3L, TO-Series TOLL, TOLT1, TOLT2, SOD-923, SOD-723, SOD-523, SOD-323, SOD-123, SOD-123FL, SOD-123HE, SOD-323HE, SOD-80(LL-34), SOD882, SOD Series SMAW, SMAF, SMAFL, SMAFHE, SMBF, SMBFL, SMP, SM Series 0402, 0603, 0805, 1206, SOT-23, SOT-89, SOT-223, SOT Series SC-88, SC-89, SC-70, SC Series, DFN0603, DFN1608, DFN1610, DFN2020, DFN2018, DFN Series, PDFN3*3, PDFN5*6, PDFN8*8, PDFN Series, AK3 Series

BRIDGE RECTIFIER:

SM-1, MBF, MBFS, MBS, MBSS, MBM, ABS, ABF, AKB, TMBF, HBS, LDB-S, DB-1, DB-S, RS, RB, KBL, KBU, KBP, TBP, TBP-1, KBPC, GBP, GBPC, GBU, GBL, SGBJ, GBJ, KBJ, KBJL, BR, WOL, WOM, WOG, D3K, HV, GH, BCT, PSD, LD, SBL, BU, IBS, WOB, WOBM

DIODE MODULE、RECTIFIER MODULE、BRIDGE RECTIFIER MODULE:

MDC Series, QL Series, SQL Series, MDS Series, MDA Series, MDK Series, MDQ Series, XQ Series, KPBC Series

PHOTOVOLTAIC MODULE:

09E, QC3Q, Z8X, TS306X, JA005, 09ES

MOSFET、IGBT、SIC、GAN、SCR、TRIAC、TRANSISTOR:

DIP25, DIP24, DIP24F, DIP Series module, TO-92, TO-251, TO-251S, TO-252, TO-252-4L, PTO-252, TO-126, TO-220A, TO-220B, TO-220AB, TO-220C, ITO-220AB, TO-220F, TO-220FJ, TO-263, TO-263-5L, TO-263-6L, TO-263-7L, TO-262, TO-3P, TO-3PF, TO-247, TO-247S, TO-247L, TO-247H, TO-247-4L, TO-247Plus-3L, TO-247Plus-4L, TO-264-3L, TO-264PLUS-3L, TO Series, TOLL, TOLT1, TOLT2, SOT-23, SOT-23-3L, SOT-89, SOT-223, SOT-143, SOT Series, SOP-89, SOP-8, SOP Series, DFN3*3, DFN5*6, DFN8*8, DFN2020, DFN3030, DFN Series, PDFN3*3, PDFN3*3-D, PDFN5*6, PDFN5*6-D, LFPK5*6, PDFN8*8, PDFN Series QFN3*3, QFN Series

IC:

SOT-23-5/6, SOP-8/14/16/18/20/24/28/30/36/48, SOT Series, SSOP-8/14/16/18/20/24/28/36/48, SSOP Series, MSOP-10/14, MSOP Series, TSSOP-14/20/28, TSSOP Series, DIP-8/14/16/20/24/28/36/48, DIP Series, QFN16/20/24/28/32/40/48/64, QFN Series



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DFN6/8/10/20, DFN Series, LQPF32/44/48/52/64/100, LQPF Series

SOP-8L, SOP Series, SOP Series+

Low Dropout Regulator(LDO)、Three-terminal precision voltage regulator、Voltage Regulator:

SOT-23, SOT-89, SOT-223, SOT Series, TO-252, TO-220, TO-263, TO-263-5L, TO Series



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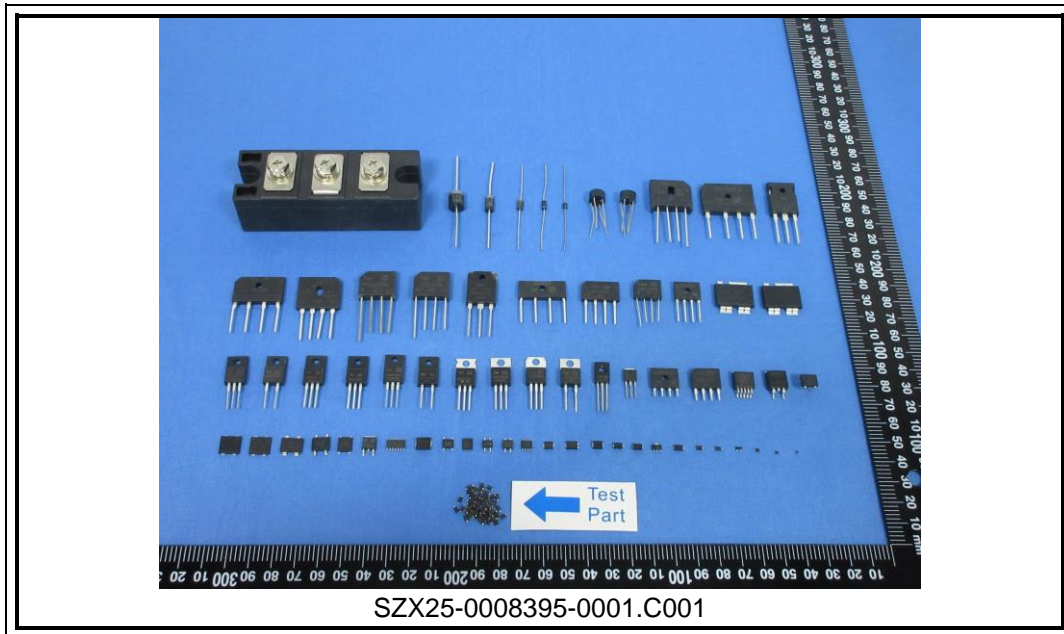
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