

# Test Report

No.: SZXEC25000189209

Date: Jan 24, 2025

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Client Name: SHENZHEN SCTF ELECTRONICS CO.,LTD

Client Address: 10/F, BUILDING T2,FANGDACHENG,LONGZHU 4TH ROAD, NANSHAN DISTRICT, SHENZHEN, CHINA

Sample Name: Crystal Resonator

Model No.: HC-49S

Client Ref. Information: HC-49S, HC-49SMD, HC-M49S, HC-M49SMD, HC-49U, UM-1, UM-5

Manufacturer: SCTF

Supplier: SCTF

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

SGS Job No.: SZP25-002948

Sample Receiving Date: Jan 17, 2025

Testing Period: Jan 17, 2025 ~ Jan 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  |
|---|-------------|
| 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) | See Results |
| Lead, Mercury, Cadmium and Hexavalent chromium  | See Results |
| Halogen   | See Results |

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



Tina Fan  
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   | A5         | SZX25-0001892-0001.C005 | Silvery body (mixed) |
| SN2   | A6         | SZX25-0001892-0001.C006 | 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

**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)                              | Unit(s) | MDL | A5 |
|---|---------|-----|----|
| Lead (Pb)                                 | mg/kg   | 2   | 6  |
| Mercury (Hg)                              | mg/kg   | 2   | ND |
| Cadmium (Cd)                              | mg/kg   | 2   | ND |
| Hexavalent Chromium (Cr(VI))              | mg/kg   | 8   | ND |
| Polybrominated biphenyls (PBB)            | 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)     | 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)                            | Unit(s) | MDL | A5 |
|---|---------|-----|----|
| Octabrominated diphenyl ether (OctaBDE) | mg/kg   | 25  | ND |
| Nonabrominated diphenyl ether (NonaBDE) | mg/kg   | 25  | ND |
| Decabrominated diphenyl ether (DecaBDE) | mg/kg   | 25  | ND |
| Di-2-Ethyl Hexyl Phthalate (DEHP)       | mg/kg   | 50  | ND |
| Benzyl Butyl Phthalate (BBP)            | mg/kg   | 50  | ND |
| Dibutyl Phthalate (DBP)                 | mg/kg   | 50  | ND |
| Diisobutyl Phthalate (DIBP)             | mg/kg   | 50  | ND |

## 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/AAS and UV-Vis.

| Test Item(s)                   | Unit(s)            | MDL  | A6 |
|--------------------------------|--------------------|------|----|
| Lead (Pb)                      | mg/kg              | 2    | ND |
| Mercury (Hg)                   | mg/kg              | 2    | ND |
| Cadmium (Cd)                   | mg/kg              | 2    | ND |
| Hexavalent Chromium (Cr(VI)) ▼ | µg/cm <sup>2</sup> | 0.10 | ND |

### Notes:

- (1) ▼ =
- 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).
  - The sample is negative for Cr(VI) if Cr(VI) is ND (concentration less than 0.10 µg/cm<sup>2</sup>). The coating is considered a non-Cr(VI) based coating.
  - The result between 0.10 µg/cm<sup>2</sup> and 0.13 µg/cm<sup>2</sup> 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 | A5 |
|--------------|---------|-----|----|
| Fluorine(F)  | mg/kg   | 20  | ND |
| Chlorine(Cl) | mg/kg   | 50  | ND |
| Bromine(Br)  | mg/kg   | 50  | ND |
| Iodine(I)    | mg/kg   | 50  | ND |

Remark: The sample(s) of A5 was/were analyzed on behalf of the applicant as mixing sample in one testing. The above result(s) was/were only given as the informality value and only for reference. 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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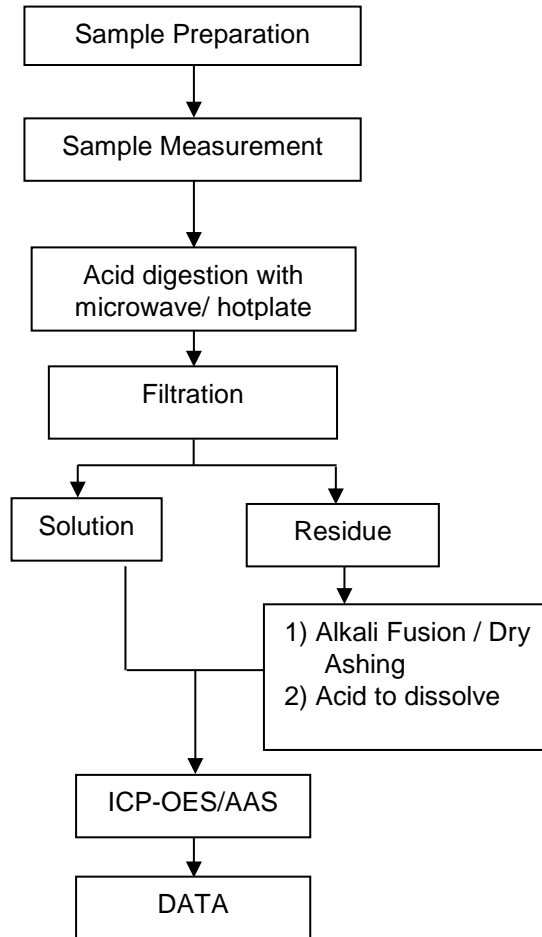
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### Elements Testing Flow Chart

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

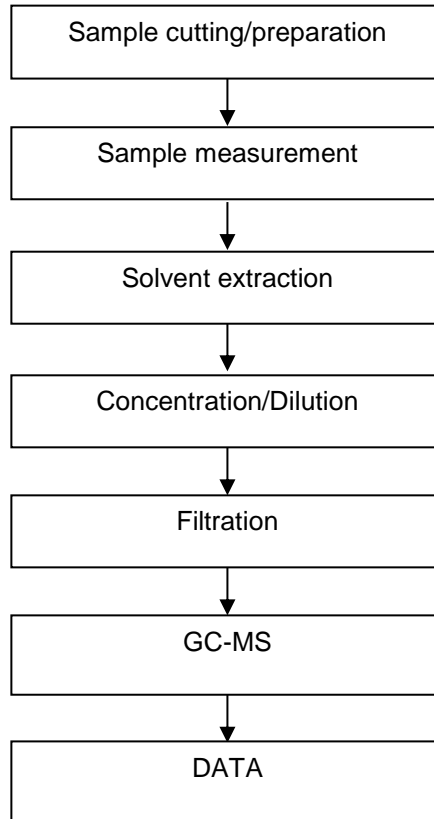


**Hexavalent Chromium (Cr(VI)) Testing Flow Chart**





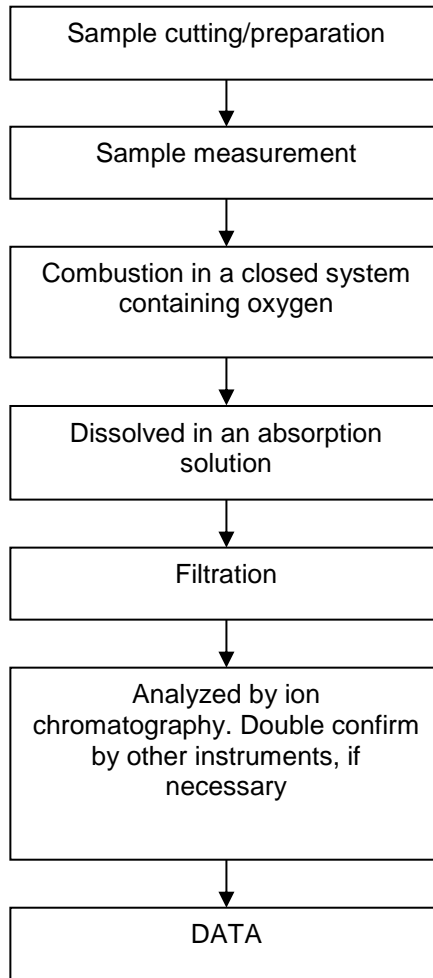
**PBB/PBDE/Phthalates Testing Flow Chart**



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### Halogen Testing Flow Chart



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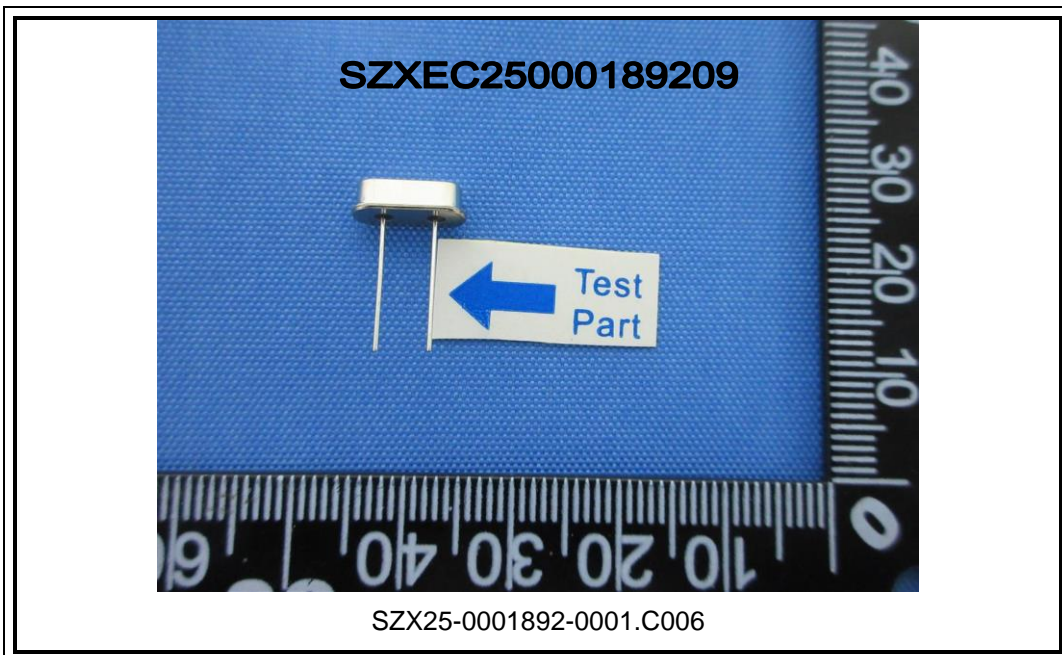
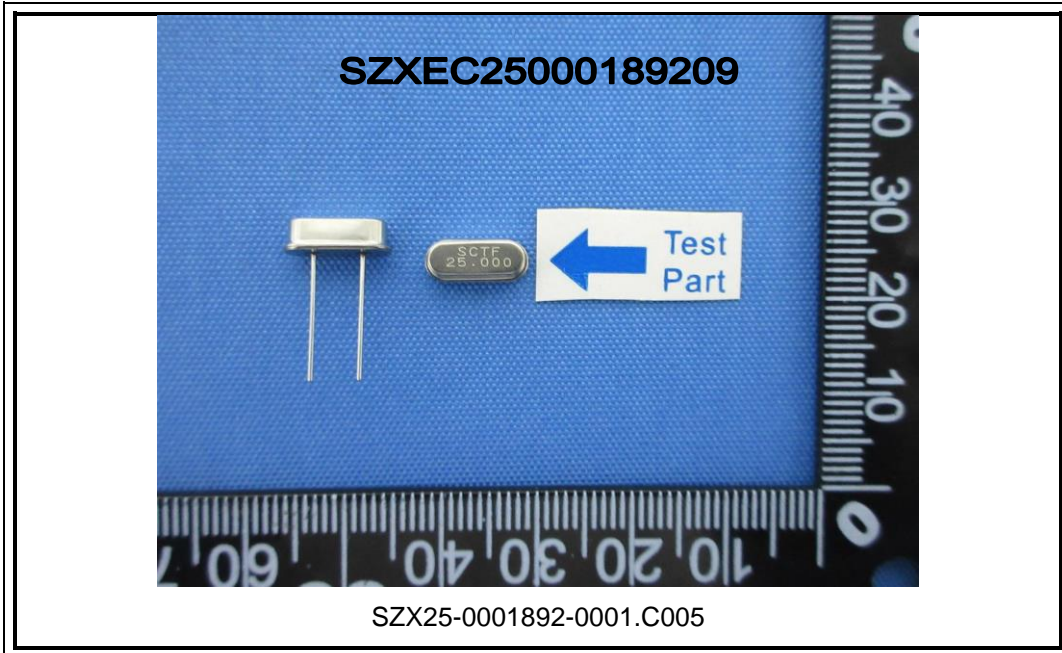
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### Sample Photo:



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