

Test Report

No. CANEC1004343601

Date: 25 Oct 2010

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HARMONY ELECTRONICS (SHENZHEN)CO.,LTD.
QIAOTANG RD,TANGWEI VILLAGE FUYONG TOWN SHENZHEN CITY
CHINA

The following sample(s) was/were submitted and identified on behalf of the clients as :
QUARTZ CRYSTAL

SGS Job No. : 12784534 - SZ
Tested Sample Information : AT-49S AND HC-49/U
Date of Sample Received : 19 Oct 2010
Testing Period : 19 Oct 2010 - 25 Oct 2010
Test Requested : Selected test(s) as requested by client.
Test Method : Please refer to next page(s).
Test Results : Please refer to next page(s).

Signed for and on behalf of
SGS-CSTC Ltd.



Silva Zhou
Approved Signatory

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Test Results:

ID for specimen 1 : CAN10-043436.001
 Description for specimen 1 : Silvery metal pin(said to be"AT-49S")+Silvery metal pin(HC-49/U)

RoHS Directive 2002/95/EC

| Test Item(s) | Unit | Test Method (Reference) | Result | MDL | Limit |
|--|-------|-------------------------|----------|-----|-------|
| Cadmium (Cd) | mg/kg | IEC 62321:2008, ICP-OES | N.D. | 2 | 100 |
| Lead (Pb) | mg/kg | IEC 62321:2008, ICP-OES | 6 | 2 | 1000 |
| Mercury (Hg) | mg/kg | IEC 62321:2008, ICP-OES | N.D. | 2 | 1000 |
| Hexavalent Chromium (CrVI) by boiling water extraction | - | IEC 62321:2008, UV-Vis | Negative | ◇ | # |
| Sum of PBBs | mg/kg | - | N.D. | - | 1000 |
| Monobromobiphenyl | mg/kg | IEC 62321:2008, GC-MS | N.D. | 5 | |
| Dibromobiphenyl | mg/kg | IEC 62321:2008, GC-MS | N.D. | 5 | |
| Tribromobiphenyl | mg/kg | IEC 62321:2008, GC-MS | N.D. | 5 | |
| Tetrabromobiphenyl | mg/kg | IEC 62321:2008, GC-MS | N.D. | 5 | |
| Pentabromobiphenyl | mg/kg | IEC 62321:2008, GC-MS | N.D. | 5 | |
| Hexabromobiphenyl | mg/kg | IEC 62321:2008, GC-MS | N.D. | 5 | |
| Heptabromobiphenyl | mg/kg | IEC 62321:2008, GC-MS | N.D. | 5 | |
| Octabromobiphenyl | mg/kg | IEC 62321:2008, GC-MS | N.D. | 5 | |
| Nonabromobiphenyl | mg/kg | IEC 62321:2008, GC-MS | N.D. | 5 | |
| Decabromobiphenyl | mg/kg | IEC 62321:2008, GC-MS | N.D. | 5 | |
| Sum of PBDEs | mg/kg | - | N.D. | - | 1000 |
| Monobromodiphenyl ether | mg/kg | IEC 62321:2008, GC-MS | N.D. | 5 | |
| Dibromodiphenyl ether | mg/kg | IEC 62321:2008, GC-MS | N.D. | 5 | |
| Tribromodiphenyl ether | mg/kg | IEC 62321:2008, GC-MS | N.D. | 5 | |
| Tetrabromodiphenyl ether | mg/kg | IEC 62321:2008, GC-MS | N.D. | 5 | |
| Pentabromodiphenyl ether | mg/kg | IEC 62321:2008, GC-MS | N.D. | 5 | |
| Hexabromodiphenyl ether | mg/kg | IEC 62321:2008, GC-MS | N.D. | 5 | |
| Heptabromodiphenyl ether | mg/kg | IEC 62321:2008, GC-MS | N.D. | 5 | |
| Octabromodiphenyl ether | mg/kg | IEC 62321:2008, GC-MS | N.D. | 5 | |
| Nonabromodiphenyl ether | mg/kg | IEC 62321:2008, GC-MS | N.D. | 5 | |
| Decabromodiphenyl ether | mg/kg | IEC 62321:2008, GC-MS | N.D. | 5 | |

Note:

1. mg/kg = ppm
2. N.D. = Not Detected (< MDL)
3. MDL = Method Detection Limit
4. ◇ = Spot-Test:
 Negative = Absence of CrVI coating, Positive = Presence of CrVI coating;
 (The tested sample should be further verified by boiling-water-extraction method if the spot test result is negative or cannot be confirmed.)
 Boiling-water-extraction:

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Negative = Absence of CrVI coating

Positive = Presence of CrVI coating; the detected concentration in boiling-water-extraction solution is equal or greater than 0.02 mg/kg with 50 cm² sample surface area.

Storage conditions and production date of the tested sample are unavailable and thus results of Cr(VI) represent status of the sample at the time of testing.

5. # = Positive indicates the presence of CrVI on the tested areas.

Negative indicates the absence of CrVI on the tested areas.

6. "-" = Not regulated

PFOS (Perfluorooctane sulfonates)

| Test Item(s) | Unit | Test Method (Reference) | Result | MDL |
|-----------------------------------|-------|-------------------------|--------|-----|
| Perfluorooctane sulfonates (PFOS) | mg/kg | EPA 3550C: 2007, LC-MS | N.D. | 10 |
| PFOS Acid | | | | |
| PFOS Metal Salt | | | | |
| PFOS Amide | | | | |

Note:

1. mg/kg = ppm
2. N.D. = Not Detected (< MDL)
3. MDL = Method Detection Limit

For reference: Entry 53 of Regulation (EC) No 552/2009 amending Annex XVII of REACH Regulation (EC) No 1907/2006 (previously restricted under Directive 2006/122/EC):

(1) May not be placed on the market or used as a substance or constituent of preparations in a concentration equal to or higher than 0,005 % by mass.

(2) May not be placed on the market in semi-finished products or articles, or parts thereof, if the concentration of PFOS is equal to or higher than 0,1 % by mass calculated with reference to the mass of structurally or microstructurally distinct parts that contain PFOS or, for textiles or other coated materials, if the amount of PFOS is equal to or higher than 1µg /m² of the coated material.

Halogen

| Test Item(s) | Unit | Test Method (Reference) | Result | MDL |
|---------------|-------|-------------------------|--------|-----|
| Fluorine (F) | mg/kg | BS EN 14582:2007, IC | N.D. | 50 |
| Chlorine (Cl) | mg/kg | BS EN 14582:2007, IC | N.D. | 50 |
| Bromine (Br) | mg/kg | BS EN 14582:2007, IC | N.D. | 50 |
| Iodine (I) | mg/kg | BS EN 14582:2007, IC | N.D. | 50 |

Note:

1. mg/kg = ppm
2. N.D. = Not Detected (< MDL)
3. MDL = Method Detection Limit

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ID for specimen 2 : CAN10-043436.002
 Description for specimen 2 : Silvery body(said to be"AT-49S")+Silvery body w/ black printing(HC-49/U)

RoHS Directive 2002/95/EC

| Test Item(s) | Unit | Test Method (Reference) | Result | MDL | Limit |
|---|-------|-------------------------|--------|-----|-------|
| Cadmium (Cd) | mg/kg | IEC 62321:2008, ICP-OES | N.D. | 2 | 100 |
| Lead (Pb) | mg/kg | IEC 62321:2008, ICP-OES | 11 | 2 | 1000 |
| Mercury (Hg) | mg/kg | IEC 62321:2008, ICP-OES | N.D. | 2 | 1000 |
| Hexavalent Chromium (CrVI) by alkaline extraction | mg/kg | IEC 62321:2008, UV-Vis | N.D. | 2 | 1000 |
| Sum of PBBs | mg/kg | - | N.D. | - | 1000 |
| Monobromobiphenyl | mg/kg | IEC 62321:2008, GC-MS | N.D. | 5 | |
| Dibromobiphenyl | mg/kg | IEC 62321:2008, GC-MS | N.D. | 5 | |
| Tribromobiphenyl | mg/kg | IEC 62321:2008, GC-MS | N.D. | 5 | |
| Tetrabromobiphenyl | mg/kg | IEC 62321:2008, GC-MS | N.D. | 5 | |
| Pentabromobiphenyl | mg/kg | IEC 62321:2008, GC-MS | N.D. | 5 | |
| Hexabromobiphenyl | mg/kg | IEC 62321:2008, GC-MS | N.D. | 5 | |
| Heptabromobiphenyl | mg/kg | IEC 62321:2008, GC-MS | N.D. | 5 | |
| Octabromobiphenyl | mg/kg | IEC 62321:2008, GC-MS | N.D. | 5 | |
| Nonabromobiphenyl | mg/kg | IEC 62321:2008, GC-MS | N.D. | 5 | |
| Decabromobiphenyl | mg/kg | IEC 62321:2008, GC-MS | N.D. | 5 | |
| Sum of PBDEs | mg/kg | - | N.D. | - | 1000 |
| Monobromodiphenyl ether | mg/kg | IEC 62321:2008, GC-MS | N.D. | 5 | |
| Dibromodiphenyl ether | mg/kg | IEC 62321:2008, GC-MS | N.D. | 5 | |
| Tribromodiphenyl ether | mg/kg | IEC 62321:2008, GC-MS | N.D. | 5 | |
| Tetrabromodiphenyl ether | mg/kg | IEC 62321:2008, GC-MS | N.D. | 5 | |
| Pentabromodiphenyl ether | mg/kg | IEC 62321:2008, GC-MS | N.D. | 5 | |
| Hexabromodiphenyl ether | mg/kg | IEC 62321:2008, GC-MS | N.D. | 5 | |
| Heptabromodiphenyl ether | mg/kg | IEC 62321:2008, GC-MS | N.D. | 5 | |
| Octabromodiphenyl ether | mg/kg | IEC 62321:2008, GC-MS | N.D. | 5 | |
| Nonabromodiphenyl ether | mg/kg | IEC 62321:2008, GC-MS | N.D. | 5 | |
| Decabromodiphenyl ether | mg/kg | IEC 62321:2008, GC-MS | N.D. | 5 | |

Note:

1. mg/kg = ppm
2. N.D. = Not Detected (< MDL)
3. MDL = Method Detection Limit
4. "-" = Not regulated

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PFOS (Perfluorooctane sulfonates)

| Test Item(s) | Unit | Test Method (Reference) | Result | MDL |
|-----------------------------------|-------|-------------------------|--------|-----|
| Perfluorooctane sulfonates (PFOS) | mg/kg | EPA 3550C: 2007, LC-MS | N.D. | 10 |
| PFOS Acid | | | | |
| PFOS Metal Salt | | | | |
| PFOS Amide | | | | |

Note:

1. mg/kg = ppm
2. N.D. = Not Detected (< MDL)
3. MDL = Method Detection Limit

For reference: Entry 53 of Regulation (EC) No 552/2009 amending Annex XVII of REACH Regulation (EC) No 1907/2006 (previously restricted under Directive 2006/122/EC):

(1) May not be placed on the market or used as a substance or constituent of preparations in a concentration equal to or higher than 0,005 % by mass.

(2) May not be placed on the market in semi-finished products or articles, or parts thereof, if the concentration of PFOS is equal to or higher than 0,1 % by mass calculated with reference to the mass of structurally or microstructurally distinct parts that contain PFOS or, for textiles or other coated materials, if the amount of PFOS is equal to or higher than 1µg /m² of the coated material.

Halogen

| Test Item(s) | Unit | Test Method (Reference) | Result | MDL |
|---------------|-------|-------------------------|--------|-----|
| Fluorine (F) | mg/kg | BS EN 14582:2007, IC | N.D. | 50 |
| Chlorine (Cl) | mg/kg | BS EN 14582:2007, IC | N.D. | 50 |
| Bromine (Br) | mg/kg | BS EN 14582:2007, IC | N.D. | 50 |
| Iodine (I) | mg/kg | BS EN 14582:2007, IC | N.D. | 50 |

Note:

1. mg/kg = ppm
2. N.D. = Not Detected (< MDL)
3. MDL = Method Detection Limit

Remark1 : Results shown are of the total weight of mixed samples.

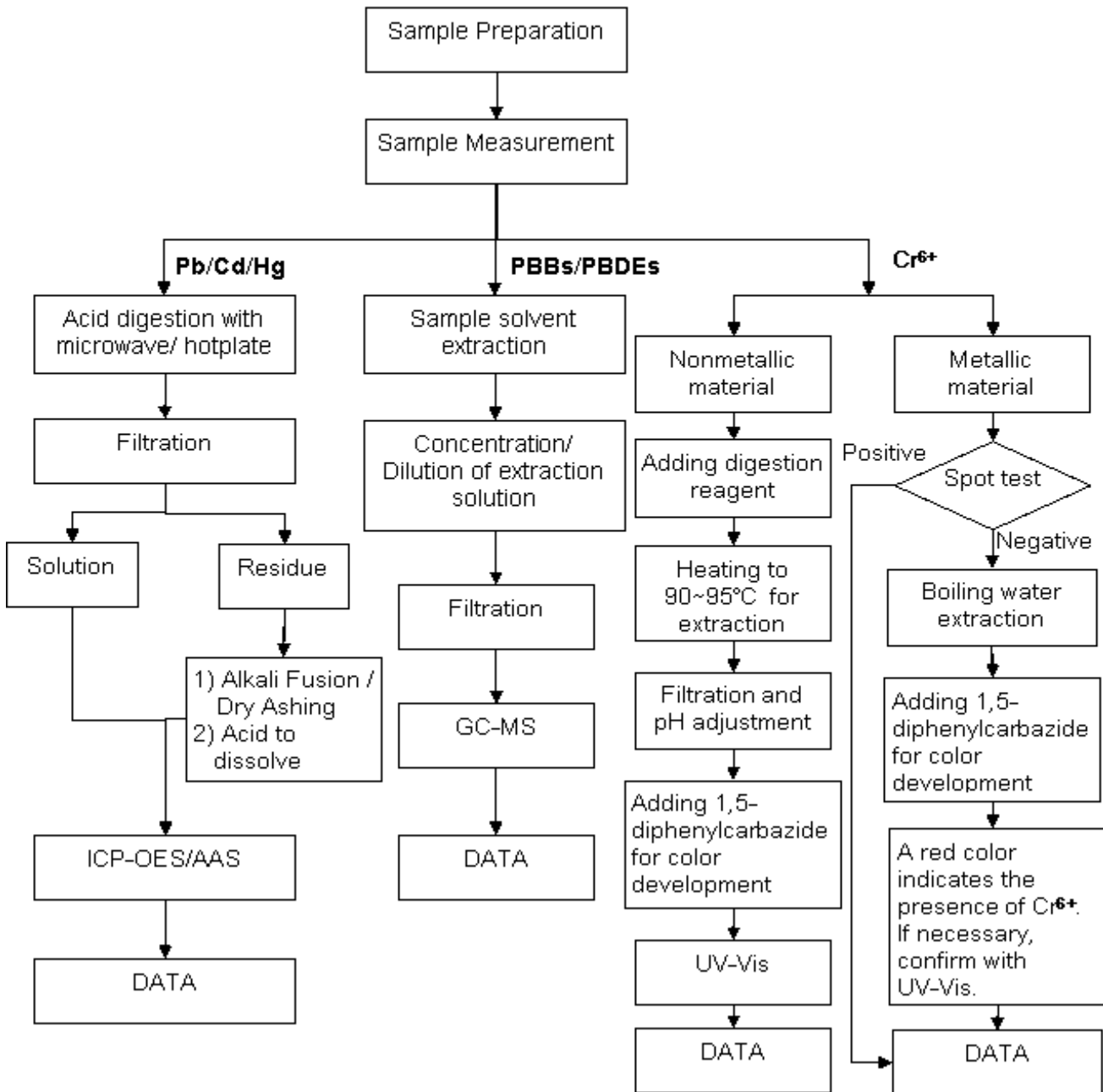
Remark2 : The sample(s) was/were analyzed on behalf of the applicant as mixing sample in one testing. The above result(s) was/were only given as the informality value and only for reference.

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ATTACHMENTS

RoHS Testing Flow Chart

- 1) Name of the person who made testing: Bella Wang / Cutey Yu / Ross Zhan
- 2) Name of the person in charge of testing: Adams Yu / Ryan Yang
- 3) These samples were dissolved totally by pre-conditioning method according to below flow chart (Cr6+ and PBBs/PBDEs test method excluded).

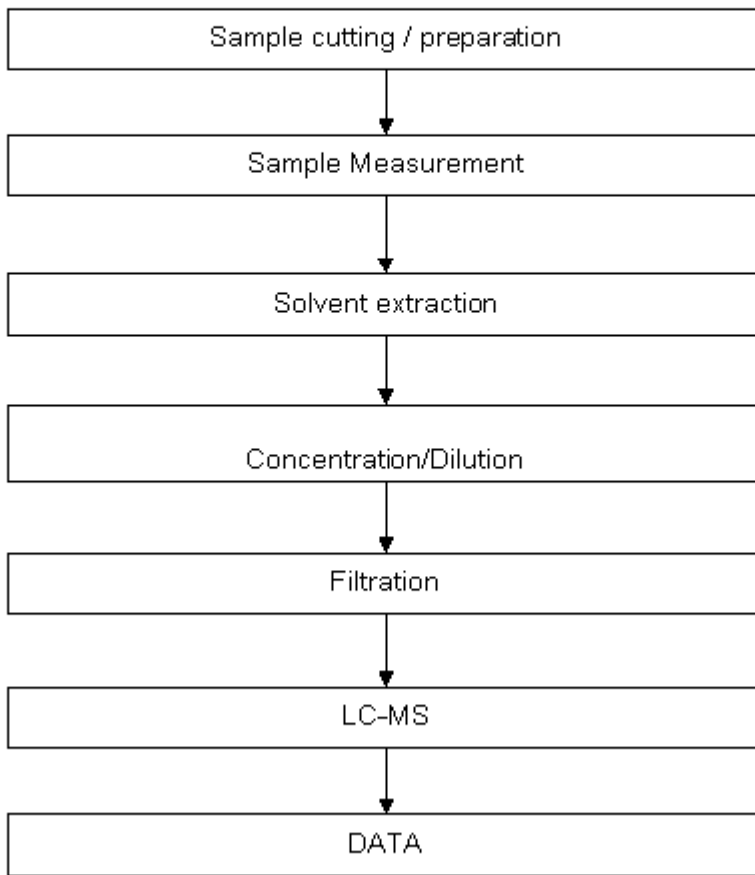


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ATTACHMENTS

PFOA / PFOS Testing Flow Chart

- 1) Name of the person who made testing: Cindy Huang
- 2) Name of the person in charge of testing: Ryan Yang

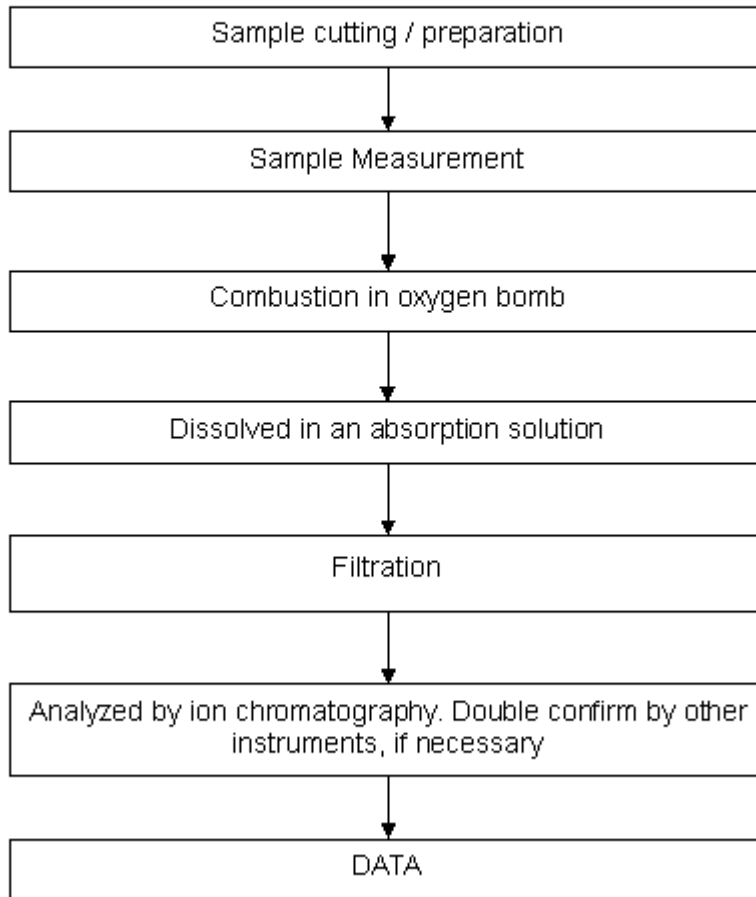


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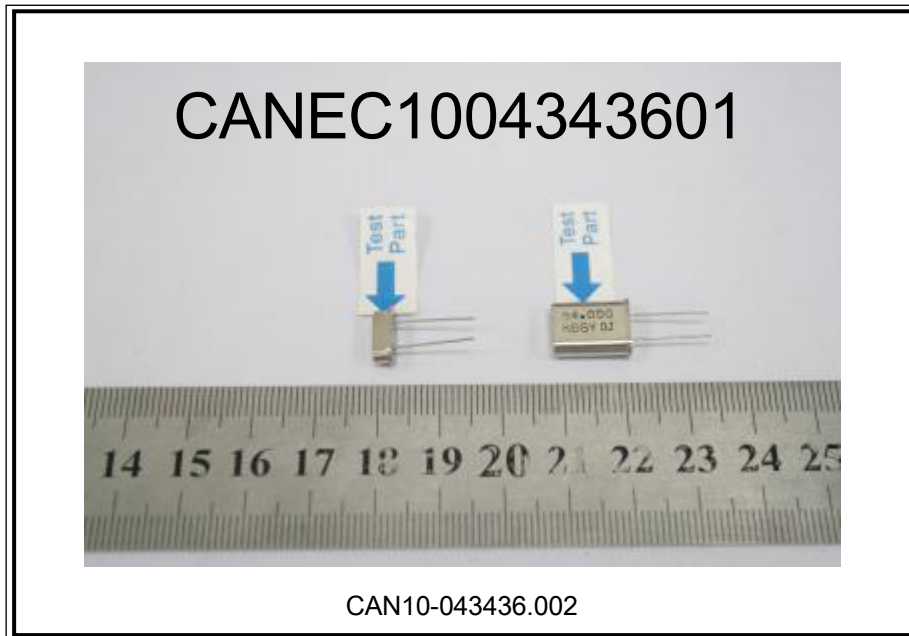
Halogen Testing Flow Chart

- 1) Name of the person who made testing: Liang Wang
- 2) Name of the person in charge of testing: Michelle Song



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Sample photo:



SGS authenticate the photo on original report only
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