

**Test Report**

Report No.: 180814123GZU-002

Date: Sep 18, 2018

Applicant: AILUN ELECTRONIC TECHNOLOGY (H.K) LIMITED  
1001R.10F TAIYOU BUILDING.181 FOHNSTON ROAD,  
WANCHAI HK

Sample Description:

The following submitted sample(s) said to be:

Item Name : **Monolithic capacitor**  
Model No. : NA  
Additional Info. : IKEA's Supplier Code: 2452  
Date of Sample Received : Aug 30, 2018  
Testing Period : Aug 30, 2018 to Sep 13, 2018

Tests conducted:

As requested by the applicant, refer to following page(s) for details.

Comment:

The results of tested component(s) do not exceeded the limit of Lead (Pb) of IKEA Specification IOS-PRG-0027 Version No. AA-224712-5, whereas did not exceed the limits of Cadmium (Cd), Mercury (Hg), Chromium (VI) (Cr6+), Polybrominated Biphenyls (PBBs) & Polybrominated Diphenyl Ethers (PBDEs) of IKEA Specification IOS-PRG-0027 Version No. AA-224712-5.

| Tested Sample                         | Standard  | Result |
|---------------------------------------|---|--------|
| Tested components of submitted sample | Phthalates content based on RoHS Directive 2011/65/EU and (EU) 2015/863 | Pass   |

Authorized by:

For Intertek Testing Services Shenzhen Ltd. Guangzhou Branch:


Martin He  
Senior Project Engineer



**Test Report**

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Date: Sep 18, 2018

RoHS Chemical Test

Tested Components:

- (1) A-B
  - (1a) Yellow body
  - (1b) Silver color metal

Part A:

(A) Test Result Summary (For IKEA Specification IOS-PRG-0027 Version No. AA-224712-5):

| Testing Item   | Result      |
|--|-------------|
|  | <b>(1a)</b> |
| Cadmium (Cd) Content (mg/kg)                                     | ND          |
| Lead (Pb) Content (mg/kg)  | 22          |
| Mercury (Hg) Content (mg/kg)                                     | ND          |
| Chromium (VI)(Cr <sup>6+</sup> ) Content (mg/kg) (For Non-metal) | ND          |
| Polybrominated Biphenyls (PBBs)(mg/kg)                           |             |
| Monobromobiphenyl (MonoBB)                                       | ND          |
| Dibromobiphenyl (DiBB)   | ND          |
| Tribromobiphenyl (TriBB)   | ND          |
| Tetrabromobiphenyl (TetraBB)                                     | ND          |
| Pentabromobiphenyl (PentaBB)                                     | ND          |
| Hexabromobiphenyl (HexaBB)                                       | ND          |
| Heptabromobiphenyl (HeptaBB)                                     | ND          |
| Octabromobiphenyl (OctaBB)                                       | ND          |
| Nonabromobiphenyl (NonaBB)                                       | ND          |
| Decabromobiphenyl (DecaBB)                                       | ND          |
| Polybrominated Diphenyl Ethers (PBDEs)(mg/kg)                    |             |
| Monobromodiphenyl Ether (MonoBDE)                                | ND          |
| Dibromodiphenyl Ether (DiBDE)                                    | ND          |
| Tribromodiphenyl Ether (TriBDE)                                  | ND          |
| Tetrabromodiphenyl Ether (TetraBDE)                              | ND          |
| Pentabromodiphenyl Ether (PentaBDE)                              | ND          |
| Hexabromodiphenyl Ether (HexaBDE)                                | ND          |
| Heptabromodiphenyl Ether (HeptaBDE)                              | ND          |
| Octabromodiphenyl Ether (OctaBDE)                                | ND          |
| Nonabromodiphenyl Ether (NonaBDE)                                | ND          |
| Decabromodiphenyl Ether (DecaBDE)                                | ND          |

| Testing Item  | Result               |
|---|----------------------|
|   | <b>(1b)</b>          |
| Cadmium (Cd) Content (mg/kg)  | ND                   |
| Lead (Pb) Content (mg/kg)   | ND                   |
| Mercury (Hg) Content (mg/kg)  | ND                   |
| Chromium (VI)(Cr <sup>6+</sup> ) Result (By Boiling Water Extraction on Metal)(µg/cm <sup>2</sup> ) | < 0.10<br>(Negative) |

mg/kg = milligram per kilogram based on dry weight of sample = ppm  
ND = Not detected



(B) IKEA Requirement:

| Substance                              | Metal                | Plastics and Other Polymeric | Ceramics and Glass   | Other Materials(Including Surface Coating) |
|--|----------------------|------------------------------|----------------------|--|
| Cadmium (Cd)                           | 0.01%<br>(100 mg/kg) | 0.01%<br>(100 mg/kg)         | 0.01%<br>(100 mg/kg) | 0.01%<br>(100 mg/kg)                       |
| Lead (Pb)                              | 0.1%<br>(1000 mg/kg) | 0.03%<br>(300 mg/kg)         | 0.1%<br>(1000 mg/kg) | 0.1%<br>(1000 mg/kg)                       |
| Mercury (Hg)                           | 0.01%<br>(100 mg/kg) | 0.005%<br>(50 mg/kg)         | 0.005%<br>(50 mg/kg) | 0.005%<br>(50 mg/kg)                       |
| Chromium (VI)<br>(Cr <sup>6+</sup> )   | Negative             | 0.1%<br>(1000 mg/kg)         | 0.1%<br>(1000 mg/kg) | 0.1%<br>(1000 mg/kg)                       |
| Polybrominated Biphenyls (PBBs)        | -                    | 0.1%<br>(1000 mg/kg)         | -                    | 0.1%<br>(1000 mg/kg)                       |
| Polybrominated Diphenyl Ethers (PBDEs) | -                    | 0.1%<br>(1000 mg/kg)         | -                    | 0.1%<br>(1000 mg/kg)                       |

(C) Test Method:

| Testing Item  | Testing Method   | Reporting Limit         |
|---|--|-------------------------|
| Cadmium (Cd) Content  | With reference to IEC 62321-5 Edition 1.0:2013, by acid digestion and determined by ICP - OES  | 2 mg/kg                 |
| Lead (Pb) Content   | With reference to IEC 62321-5 Edition 1.0:2013, by acid digestion and determined by ICP - OES  | 2 mg/kg                 |
| Mercury (Hg) Content  | With reference to IEC 62321-4 Edition 1.0:2013, by acid digestion and determined by ICP - OES  | 2 mg/kg                 |
| Chromium (VI)(Cr <sup>6+</sup> ) Content                                | With reference to IEC 62321 Edition 1.0:2008, by alkaline digestion and determined by UV-VIS Spectrophotometer                             | 1 mg/kg                 |
| Chromium (VI)(Cr <sup>6+</sup> ) Content                                | With reference to IEC 62321-7-1 edition 1.0:2015, by boiling water extraction and determined by UV-VIS spectrophotometer                   | 0.10 µg/cm <sup>2</sup> |
| Polybrominated Biphenyls (PBBs)& Polybrominated Diphenyl Ethers (PBDEs) | With reference to IEC 62321-6 edition 1.0:2015, by solvent extraction and determined by GC/MS and further HPLC confirmation when necessary | 5 mg/kg                 |



Part B:

RoHS Chemical Test

(A) Test Result Summary:

| Testing Item                     | Result |
|----------------------------------|--------|
|                                  | (1a)   |
| Phthalates(mg/kg)                |        |
| Bis(2-ethylhexyl)phthalate(DEHP) | ND     |
| Butyl benzyl phthalate(BBP)      | ND     |
| Dibutyl phthalate(DBP)           | ND     |
| Diisobutyl phthalate(DIBP)       | ND     |

ND = Not detected  
mg/kg= milligram per kilogram

(B) RoHS Requirement:

| Restricted Substances            | Limits            |
|----------------------------------|-------------------|
| Phthalates(DEHP, BBP, DBP, DIBP) | 0.1% (1000 mg/kg) |

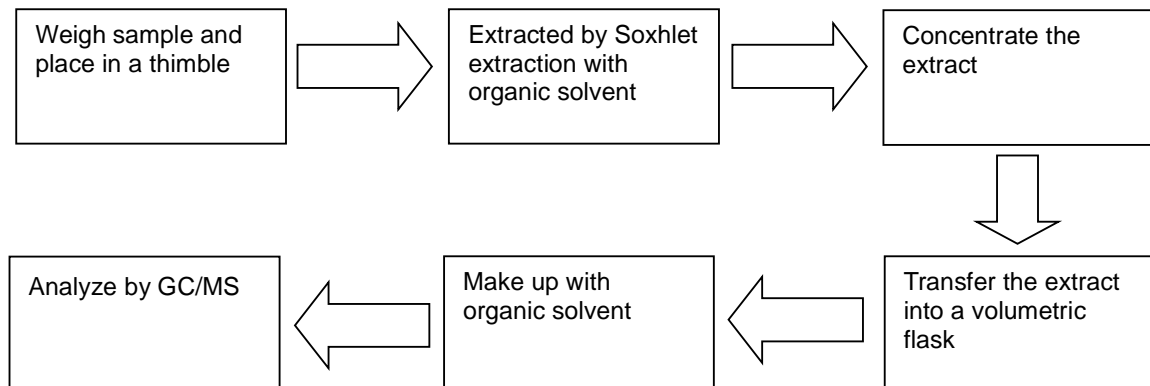
The above limits were quoted from 2011/65/EU and (EU) 2015/863 for homogeneous material.

(C) Test Method:

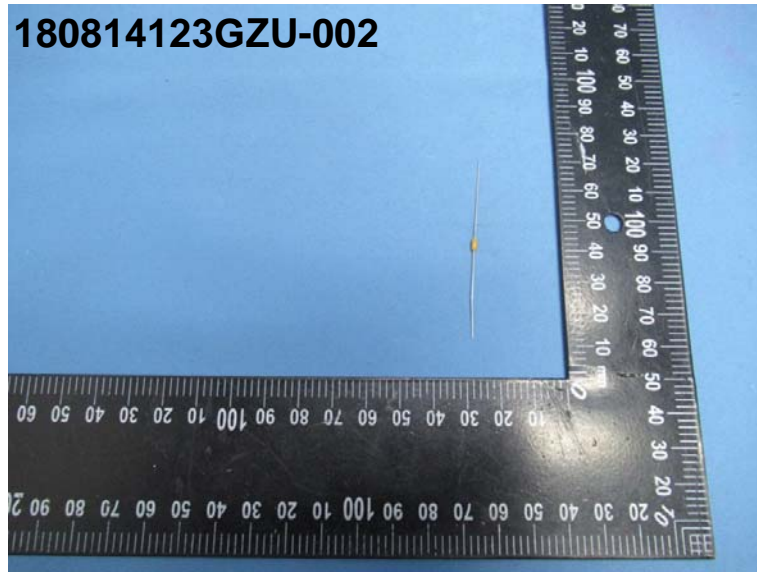
| Testing Item                             | Testing Method  | Reporting Limit |
|--|---|-----------------|
| Phthalates(DEHP, BBP, DBP, DIBP) Content | With reference to IEC 62321-8 Edition 1.0:2017, by solvent extraction and determined by GC/MS | 100mg/kg        |

(D) Measurement Flowchart:

Test for Phthalate Contents



**Sample photo**



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**End of report**

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