



## Test Report

Report No. A2230249484101011

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**Company Name** ZHEJIANG RECTRON ELECTRONIC CO.,LTD.  
**shown on Report**  
**Address** 28# LIZHENG ROAD, HUIMIN DISTRICT,JIASHAN COUNTY, JIAXING CITY,ZHEJIANG PROVINCE, CHINA

**The following sample(s) and sample information was/were submitted and identified by/on the behalf of the applicant**

**Sample Name** Ink  
**Sample Received Date** Jun. 7, 2023  
**Testing Period** Jun. 7, 2023 to Jun. 13, 2023

**Test Requested** As specified by client, to test Lead (Pb), Cadmium (Cd), Mercury (Hg), Hexavalent Chromium (Cr(VI)), Polybrominated Biphenyls (PBBs), Polybrominated Diphenyl Ethers (PBDEs), Antimony(Sb), Fluorine (F), Chlorine (Cl), Bromine (Br), Perfluorooctane Sulfonates(PFOS), Perfluorooctanoic Acid(PFOA), Phthalates , Asbestos in the submitted sample(s).

**Test Method/Test Result(s)** Please refer to the following page(s).



Approved by

*Chen Kaimin*

Date

Jun. 20, 2023

Chen kaimin  
Lab Manager

No. R509603435

Centre Testing International Pinbiao(Shanghai) Co., Ltd.

No.1351, Wanfang Road, Minhang District, Shanghai, China

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## Test Method

Tested Item(s)	Test Method	Measured Equipment(s)
Lead (Pb)	IEC 62321-5:2013	ICP-OES
Cadmium (Cd)	IEC 62321-5:2013	ICP-OES
Mercury (Hg)	IEC 62321-4:2013+AMD1:2017 CSV	ICP-OES
Hexavalent Chromium (Cr(VI))	IEC 62321-7-2:2017 and/or determination of Total Chromium by IEC 62321-5:2013	UV-Vis/ICP-OES
Polybrominated Biphenyls (PBBs)	IEC 62321-6:2015	GC-MS
Polybrominated Diphenyl Ethers (PBDEs)	IEC 62321-6:2015	GC-MS
Phthalates (DBP, BBP, DEHP, DIBP)	IEC 62321-8:2017	GC-MS
Antimony(Sb)	Refer to US EPA 3052:1996 & US EPA 6010D:2018*	ICP-OES
Fluorine (F)	Refer to EN 14582:2016	IC
Chlorine (Cl)	Refer to EN 14582:2016	IC
Bromine (Br)	Refer to EN 14582:2016	IC
Perfluorooctane Sulfonates(PFOS)	Refer to DIN CEN/TS 15968:2010*	LC-MS-MS/LC-MS
Perfluorooctanoic Acid(PFOA)	Refer to DIN CEN/TS 15968:2010*	LC-MS-MS/LC-MS
Phthalates	IEC 62321-8:2017	GC-MS
Asbestos*	ISO 22262-1:2012+NIOHSH 9000:2015+NIOHSH 9002:1994	PLM+XRD

## Test Result(s)

Tested Item(s)	Result	MDL
	011	
Lead (Pb)	N.D.	2 mg/kg
Cadmium (Cd)	N.D.	2 mg/kg
Mercury (Hg)	N.D.	2 mg/kg
Hexavalent Chromium (Cr(VI))	N.D.	8 mg/kg

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Tested Item(s)	Result	MDL
	011	
<b>Polybrominated Biphenyls (PBBs)</b>		
Monobromobiphenyl	N.D.	5 mg/kg
Dibromobiphenyl	N.D.	5 mg/kg
Tribromobiphenyl	N.D.	5 mg/kg
Tetrabromobiphenyl	N.D.	5 mg/kg
Pentabromobiphenyl	N.D.	5 mg/kg
Hexabromobiphenyl	N.D.	5 mg/kg
Heptabromobiphenyl	N.D.	5 mg/kg
Octabromobiphenyl	N.D.	5 mg/kg
Nonabromobiphenyl	N.D.	5 mg/kg
Decabromobiphenyl	N.D.	5 mg/kg

Tested Item(s)	Result	MDL
	011	
<b>Polybrominated Diphenyl Ethers (PBDEs)</b>		
Monobromodiphenyl ether	N.D.	5 mg/kg
Dibromodiphenyl ether	N.D.	5 mg/kg
Tribromodiphenyl ether	N.D.	5 mg/kg
Tetrabromodiphenyl ether	N.D.	5 mg/kg
Pentabromodiphenyl ether	N.D.	5 mg/kg
Hexabromodiphenyl ether	N.D.	5 mg/kg
Heptabromodiphenyl ether	N.D.	5 mg/kg
Octabromodiphenyl ether	N.D.	5 mg/kg
Nonabromodiphenyl ether	N.D.	5 mg/kg
Decabromodiphenyl ether	N.D.	5 mg/kg

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Tested Item(s)	Result	MDL
	011	
<b>Phthalates (DBP, BBP, DEHP, DIBP)</b>		
Dibutyl phthalate (DBP) CAS#:84-74-2	N.D.	50 mg/kg
Butyl benzyl phthalate (BBP) CAS#:85-68-7	N.D.	50 mg/kg
Di-(2-ethylhexyl) phthalate (DEHP) CAS#:117-81-7	N.D.	50 mg/kg
Diisobutyl phthalate (DIBP) CAS#:84-69-5	N.D.	50 mg/kg

Tested Item(s)	Result	MDL
	011	
Antimony (Sb)	N.D.	10 mg/kg

Tested Item(s)	Result	MDL
	011	
Fluorine (F)	N.D.	10 mg/kg
Chlorine (Cl)	N.D.	10 mg/kg
Bromine (Br)	N.D.	10 mg/kg

Tested Item(s)	Result	MDL
	011	
Perfluorooctane Sulfonates (PFOS)	N.D.	0.010 mg/kg

Tested Item(s)	Result	MDL
	011	
Perfluorooctanoic Acid (PFOA)	N.D.	0.010 mg/kg

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Tested Item(s)	Result	MDL
	011	
<b>Phthalates</b>		
Dibutyl phthalate (DBP) CAS#:84-74-2	N.D.	50 mg/kg
*Di-n-hexyl phthalate (DNHP/DHEXP) CAS#:84-75-3	N.D.	50 mg/kg
Butyl benzyl phthalate (BBP) CAS#:85-68-7	N.D.	50 mg/kg
*Dipentyl phthalate (DPP/DPENP) CAS#:131-18-0	N.D.	50 mg/kg
Di-(2-ethylhexyl) phthalate (DEHP) CAS#:117-81-7	N.D.	50 mg/kg
Di-n-octyl phthalate (DNOP) CAS#:117-84-0	N.D.	50 mg/kg
Di-isononyl phthalate (DINP) CAS#:28553-12-0,68515-48-0	N.D.	50 mg/kg
Di-iso-decyl phthalate (DIDP) CAS#:26761-40-0,68515-49-1	N.D.	50 mg/kg
Diisobutyl phthalate (DIBP) CAS#:84-69-5	N.D.	50 mg/kg
*Diisopentylphthalate (DIPP) CAS#:605-50-5	N.D.	50 mg/kg
*N-Pentyl-isopentyl phthalate (NIPP) CAS#:776297-69-9	N.D.	100 mg/kg
*Bis(2-methoxyethyl) phthalate (DMEP) CAS#:117-82-8	N.D.	50 mg/kg

Material Category	Substances/CAS Numbers	Results
		011
Asbestos* (CAS 1332-21-4)	Chrysotile/12001-29-5	N.A.D.
	Crocidolite/12001-28-4	N.A.D.
	Amosite /12172-73-5	N.A.D.
	Tremolite Asbestos/ 77536-68-6	N.A.D.
	Actinolite Asbestos /77536-66-4	N.A.D.
	Anthophyllite Asbestos/77536-67-5	N.A.D.

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**Sample/Part Description**

No.	CTI Sample ID	Description
1	011	Silvery ink (dry weight)

**Remark:** The sample(s) had been dissolved totally tested for Lead, Cadmium, Mercury, Antimony.

-MDL = Method Detection Limit

-N.D. = Not Detected (&lt;MDL)

-mg/kg = ppm = parts per million

-N.A.D.= No Asbestos Detected(&lt;Limit of detection)

The sample was tested after drying for 2 hours under 105 °C.

**Note:** “\*” indicates the item(s)/method(s) is (are) not in CNAS accreditation scope.**Explanation (Asbestos)**

-The limit of detection of this method is defined as the detection and identification of one fibre or fibre bundle in the amount of sample examined. With appropriate matrix reduction procedures that are tailored to the nature of the sample, the limit of detection can be significantly lower than 0.1%.

-The estimated concentration(s) of the asbestos varieties detected in ranges is/are as follows: Trace (<0.1%), 0.1%~5%, 5%~50%, and 50%~100%.

-CTI Asbestos Testing Center has established strict quality assurance and supervision procedures in accordance with international standard. And the laboratory participates in the AIMS\* every year (three times per year) to confirm our proficiency.

-Even after disintegration it can be very difficult, or impossible, to detect the presence of asbestos in some asbestos-containing bulk materials using polarized light microscopy. These materials often contain milled asbestos with too small fibre diameter and length to be detected.

-X-ray diffraction analysis cannot discriminate the particle shape in analytical sample and detects not only asbestos of fibrous form but also non-fibrous minerals related to asbestos such as serpentine minerals and/or amphibole minerals if they coexist.

\*The Asbestos in Materials Scheme (AIMS) is an international inter-laboratory testing scheme, and it is managed by the Health and Safety Laboratory (HSL) which on behalf of the Health and Safety Executive (HSE) of UK

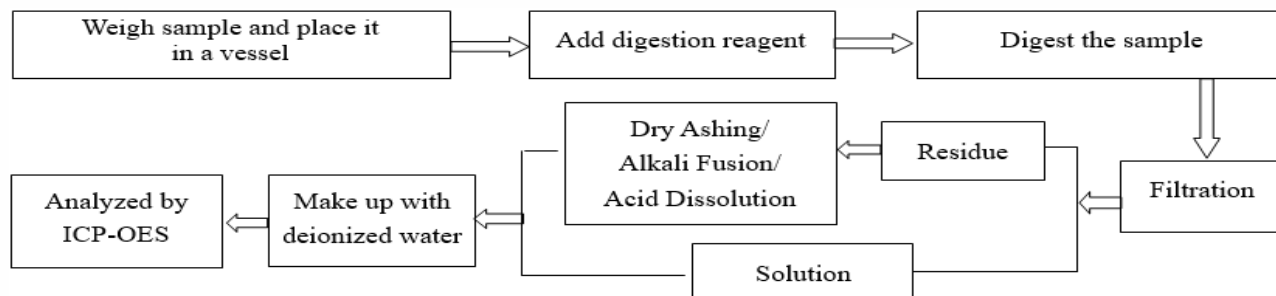
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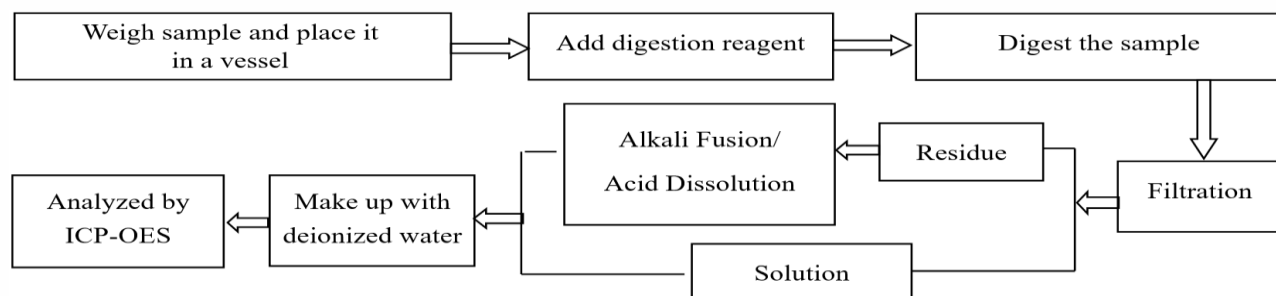
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## Test Process

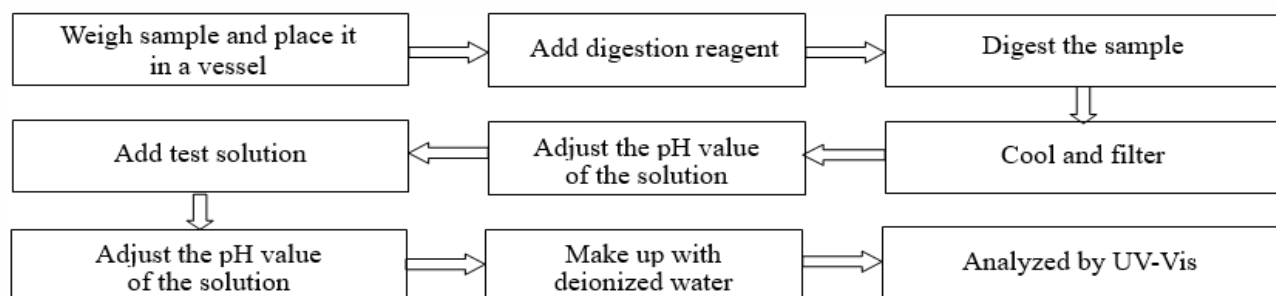
### 1. Lead (Pb), Cadmium (Cd), Chromium(Cr)



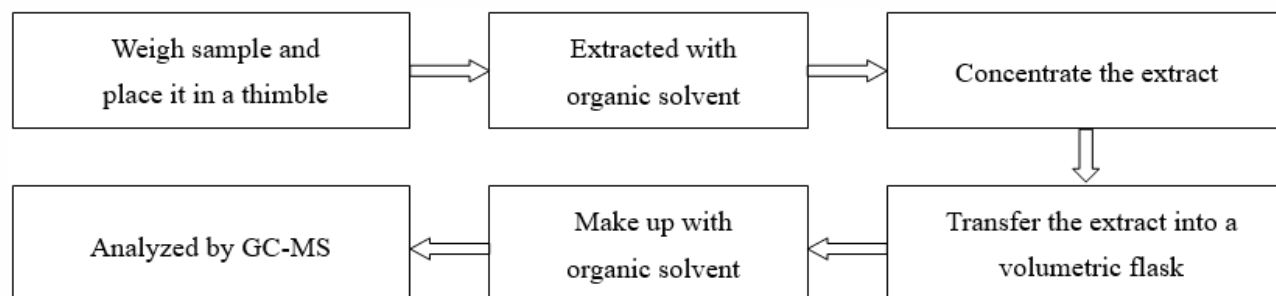
### 2. Mercury (Hg)



### 3. Hexavalent Chromium (Cr(VI))



### 4. Polybrominated Biphenyls (PBBs), Polybrominated Diphenyl Ethers (PBDEs)

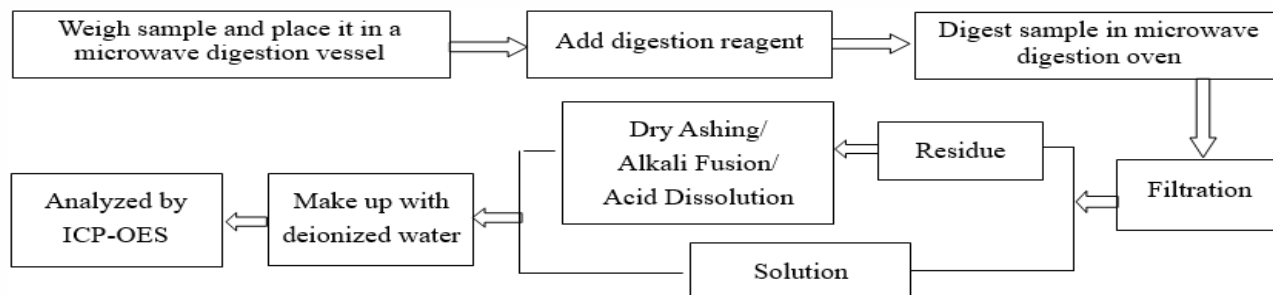


# Test Report

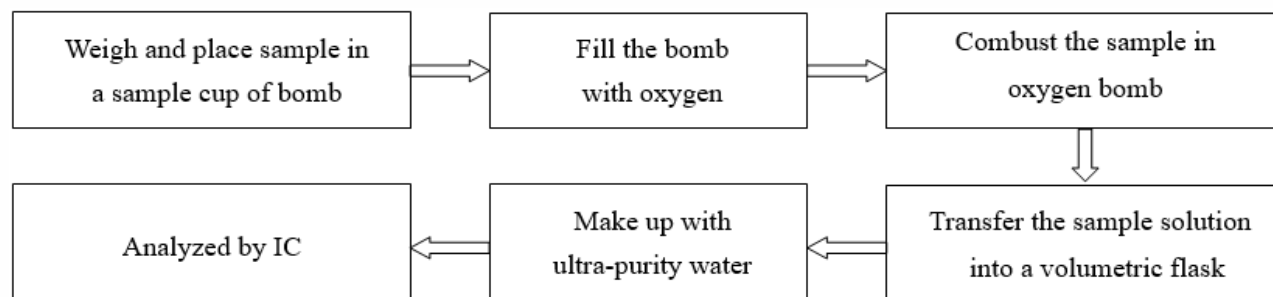
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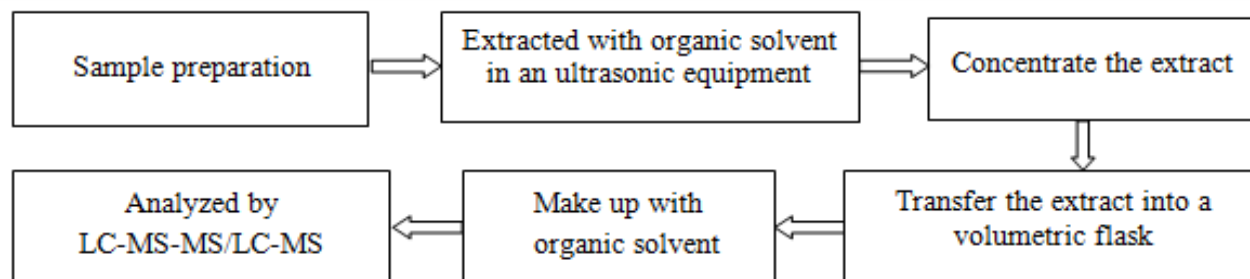
## 5. Antimony(Sb)



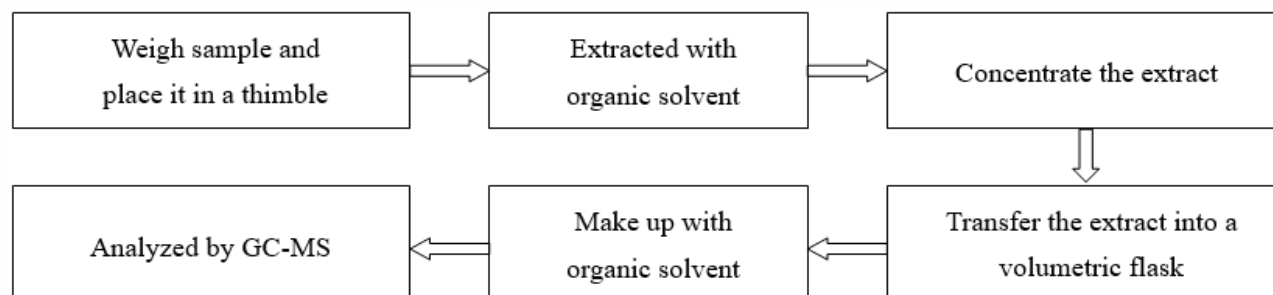
## 6. Fluorine (F), Chlorine (Cl), Bromine (Br)



## 7. Perfluorooctane Sulfonates(PFOS), Perfluorooctanoic Acid(PFOA)



## 8. Phthalates





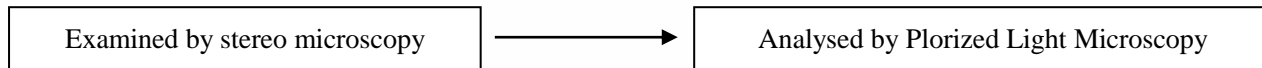
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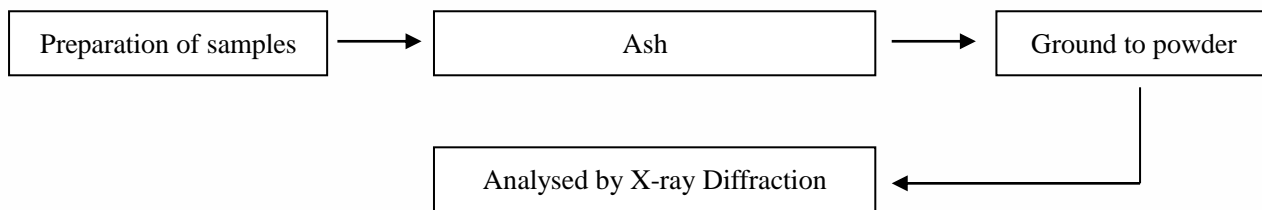
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## 9. Asbestos

### PLM



### XRD



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## Photo(s) of the sample(s)



### Statement:

1. This report is considered invalid without approved signature, special seal and the seal on the perforation;
2. The Company Name shown on Report and Address, the sample(s) and sample information was/were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified;
3. The result(s) shown in this report refer(s) only to the sample(s) tested;
4. Without written approval of CTI, this report can't be reproduced except in full;
5. In case of any discrepancy between the English version and Chinese version of the testing reports (if generated), the Chinese version shall prevail.

\*\*\* End of Report \*\*\*

## Appendix

### Client Reference Information

0402/0603/1.5KE/A405/AKM/BDB/BR-10/BR-15W/BR-3/BR-6/BR-8/BKM/CSP/D2PAK/D3K/DB/BDB/DBLS/DBS/DFN5x6EP/DFN0603/DFN0603-2L/DFN1006/DFN1006-2/2L/DFN1006-3/3L/DFN1610/DFN2.6\*2.6-10L/DFN2x2-3L/DFN2510/DFN2X2-6L/DFN3.3X3.3/DFN3x3/DFN4120-10L/DFN5x6/DFN5X6-8L/DFNWB0.6\*0.3/DI5/DO15/DO201AD/DO-213AB/DO218/DO218AB/DO277/DO34/DO35/DO41/DO41G/DPAK/ESOP-8/HR-MS/HVM/HVML/HVP/ITO220/ITO220A/ITO220AC/KBL/KBP/KBPG/LL34/LL41/LMDS/MB-F/MBM/MDA/MDC/MDF/MDK/MDS/MDSJ/MELF/MICRO-MELF/MINI-MELF/MP-15/MP-15W/MP-25/MP-25W/MP-35/MP-35W/MP-40/MP-50/MP-50W/MSBM/MSBS/MSOP10/MT-35/MT-35W/PDFN5X6P/PPAK3x3/PPAK5X6/PQFN2X2/PDFN2X2/R1/R10000H/R12000H/R10KH/R12KH/R16KH/R2/R3/R30KH/R4/R5/R6/R7/R8KH/R9KH/RB-15/RBU/RBUH/RC-2/RS1/RS1L/RS10M/RS10MLS/RS15M/RS15MLS/RS1M/RS2/RS20M/RS20MLS/RS25M/RS25MLS/RS2L/RS2M/RS30M/RS35M/RS35TB/RS40M/RS485/RS4L/RS4M/RS50M/RS6/RS6L/RS60M/RS6M/RS-6MLS/RS8/RS8L/RS8M/S35VB/S50VB/SBR/SC-75/SOT416/SKBPC/SLDBS/SlimPAQ/SlimPAQ-1/SLMDS/SLPDS/SMA (DO214AC) /SMAF/SMA-S/SMB (DO214AA/SMBF/SMB-F/SMC (DO214AB/SMX/SOD123/SOD123F/SOD123F(L)/SOD123F(L)-1/SOD123FH/SOD123FL/SOD123S/SOD123ST/SOD123FL-1/SOD323/SOD323F/SOD523/SOD523F/SOD723/SOD80C/SOD882/SOD923/SOF2-4/SOP-8L/SOP-14/SOP-8/SOT89/SOT143/SOT223/SOT223-2L/3L/SOT227/SOT23/SOT23-3L/SOT23-3S/SOT23-5/SOT236/SOT23-6/6L/SOT26/SOT323/SOT323FL/SC70/SOT346/SOT353/SOT363/SOT363-6L/SOT523/SOT563/SOT723/SOT883/SOT89/SOT89-3L/SSOD923/SSOT-6L/Sub-SMA/TO126/TO263/TO220/TO220-3L/TO220A/TO220A-1/TO220AB/TO220AC/TO220C/TO220F/TO220FAC/TO247/TO247-3L/TO247S/TO251/TO252/TO252-5L/TO3P/TO92/TO92L/TO92S/TOLL9/TQFN16/TSOT23-5/TDFN2x2-6L/TSOT23-6L/TSSOP14/TSSOP-8/TO126/TO126F/TO262/TO252-4L/TO-3P/UDFN-3L/WBFBP-02C/WOM/X3DFN2/ULBF

### Statement:

1. The Appendix Information was/were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified.
2. The Appendix Information is/are the supplement(s) for the Report A2230249484101011.