# High Current Ferrite Chip Inductor (Lead Free)

CPI160809UF-Series

	ECN HISTORY LIST							
REV	DATE	DESCRIPTION	APPROVED	CHECKED	DRAWN			
1.0	13/11/4	初版發行	楊祥忠	羅培君	張嘉玲			
2.0	14/01/24	變更電鍍錫層厚度 3.0um min.=>3.5um min.	楊祥忠	羅培君	張嘉玲			
3.0	14/08/01	變更 Reflow 圖示	楊祥忠	羅培君	張嘉玲			
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## **High Current Ferrite Chip Inductor (Lead Free)**

CPI160809UF-Series

### 1.Features

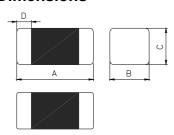
- 1. 1.6x0.8 mm and 0.95 mm in height (very compact size): CAE and fine printing technology made this compact size possible
- 2. Stable minimum DC resistance in the class.
- 3. High speed mounting: Using SMT mounter makes less than a second mounting possible.
- 4. Excellent mounting strength by SMD chip making.
- 5. Reduced noise over 2/3 of coil inductor by optimal design of CAD Completely lead-free product and support lead-free solder.







### 2. Dimensions



Chip Size						
Series	A(mm)	B(mm)	C(mm)	D(mm)		
160809	1.6±0.15	0.8±0.15	0.95 max.	0.3±0.2		

### 3. Part Numbering

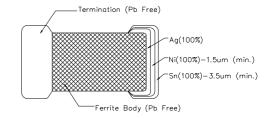


- A: Series
- **B**: Dimension
- C: Category Code
- D: Material
- E: Inductance
- F: Inductance Tolerance
- G: Rated Current

### LxWxH

Lead Free Material 1R0=1.0uH

M=±20%



### 4. Specification

Tai-Tech	Inductance(uH)	Test Frequency	Rated Current	DCR ( $\Omega$ )	
Part Number	inductance(un)	(MHz)	(mA) max.	max.	typ.
CPI160809UF-R33M-0A3	0.33±20%	1	350	0.35	0.27
CPI160809UF-R50M-0A9	0.50±20%	1	900	0.15	0.12
CPI160809UF-1R0M-0A7	1.0±20%	1	750	0.20	0.17
CPI160809UF-2R2M-0A6	2.2±20%	1	650	0.30	0.27

- Rated current: based on temperature rise test
- In compliance with EIA 595

TAI-TECH TBM01-150600879 P3.

### 5. Reliability and Test Condition

	Performance	Test Condition
Operating Temperature	-40~+85°C (Including self-temperature rise)	-
Transportation Storage Temperature	-40~+85°C (on board)	For long storage conditions, please see the Application Notice
nductance (Ls)  DC Resistance  Rated Current	Refer to standard electrical characteristics list	Agilent4291 Agilent E4991 Agilent4287 Agilent16192 Agilent 4338 DC Power Supply Over Rated Current requirements, there will be some risk
emperature Rise Test	Rated Current < 1A $\Delta$ T 20 $^{\circ}$ C Max Rated Current $\geq$ 1A $\Delta$ T 40 $^{\circ}$ C Max	Applied the allowed DC current.     Temperature measured by digital surface thermometer.
Resistance to Soldering Heat	Appearance: No damage. Impedance: within±15% of initial value Inductance: within±10% of initial value Q: Shall not exceed the specification value. RDC: Shall not exceed the specification value.	Preheat: 150°C,60sec. Solder: Sn99.5%-Cu0.5% Solder temperature: 260±5°C Flux for lead free: Rosin. 9.5% Temperature ramp/immersion and immersio rate: 25±6 mm/s Dip time: 10±1sec. Depth: completely cover the termination.
Solderability	More than 95% of the terminal electrode should be covered with solder.  Preheating Dipping Natural cooling  245°C  150°C  Preheating Dipping Natural cooling  150°C  second	Preheat: 150°C,60sec. Solder: Sn99.5%-Cu0.5% Solder temperature: 245±5°C Flux for lead free: Rosin. 9.5% Depth: completely cover the termination. Dip time: 4±1sec.
Terminal strength	Appearance: No damage. Impedance: within±15% of initial value Inductance: within±10% of initial value Q: Shall not exceed the specification value. RDC: within ±15% of initial value and shall not exceed the specification value.	Preconditioning: Run through IR reflow for 2 times.( IPC/JEDEC J-STD-020D Classification Reflow Profiles) Component mounted on a PCB apply a force (>0805:1kg <=0805:0.5kg)to the side of a device being tested. This force shall be applied for 60 +1 seconds. Also the force shall be applied gradually as not to shock the component being tested.
<b>Bending</b>	Appearance: No damage. Impedance: within±10% of initial value Inductance: within±10% of initial value Q: Shall not exceed the specification value. RDC: within±15% of initial value and shall not exceed the specification value	Shall be mounted on a FR4 substrate of the following dimensions:>=0805:40x100x1.2mm
/ibration Test	Appearance: No damage. Impedance: within±15% of initial value Inductance: within±10% of initial value Q: Shall not exceed the specification value. RDC: within ±15% of initial value and shall not exceed the specification value	Preconditioning: Run through IR reflow for 2 times.( IPC/JEDEC J-STD-020D Classification Reflow Profiles) Oscillation Frequency: 10~2K~10Hz for 20 minutes Equipment: Vibration checker Total Amplitude:1.52mm±10% Testing Time: 12 hours(20 minutes, 12 cycles each of 3 orientations)
	Appearance : No damage. Impedance : within±15% of initial value	Test condition:  Peak Normal Velocity Type Value duration Wave form change
	Inductance : within±10% of initial value	(g's) (D) (ms) (Vi)ft/sec

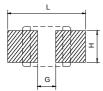
TAI-TECH TBM01-150600879 P4.

Item	Performance	Test Condition
Life test	Appearance: no damage.  Impedance: within±15%of initial value.	Preconditioning: Run through IR reflow for 2 times.( IPC/JEDEC J-STD-020D Classification Reflow Profiles) Temperature: 125±2°C (bead), 85±2°C (inductor) Applied current: rated current. Duration: 1000±12hrs. Measured at room temperature after placing for 24±2 hrs.
Load Humidity	Inductance: within±10% of initial value.  Q: Shall not exceed the specification value.  RDC: within ±15% of initial value and shall not exceed the specification value  H  Te  D  M	Preconditioning: Run through IR reflow for times.( IPC/JEDEC J-STD-020D Classificat Reflow Profiles) Humidity: 85±2%R.H. Temperature: 85±2°C. Duration: 1000hrs Min. with 100% racurrent. Measured at room temperature after place for 24±2 hrs.
Thermal shock	Appearance: no damage.  Impedance: within±15%of initial value. Inductance: within±10%of initial value. Q: Shall not exceed the specification value. RDC: within ±15% of initial value and shall not exceed the specification value	Preconditioning: Run through IR reflow for 2 times.( IPC/JEDEC J-STD-020D Classification Reflow Profiles) Condition for 1 cycle Step 1: $-40\pm2^\circ\mathbb{C}$ $=30\pm5$ min. Step 2: $25\pm2^\circ\mathbb{C}$ $=9.5$ min Step 3: $+105\pm2^\circ\mathbb{C}$ $=30\pm5$ min. Number of cycles: $500$ Measured at room temperature after placing for $24\pm2$ hrs.
Insulation Resistance	IR>1GΩ	Chip Inductor Only Test Voltage:100±10%V for 30Sec.

### 6. Soldering and Mounting

### 6-1. Recommended PC Board Pattern

	Chip Size						Pattern ow Sold	
Serie	Туре	A(mm)	B(mm)	C(mm)	D(mm)	L(mm)	G(mm)	H(mm)
CPI	160809	1.6±0.15	0.8±0.15	0.95 max.	0.3±0.20	2.60	0.60	0.80



PC board should be designed so that products can prevent damage from mechanical stress when warping the board.

### 6-2. Soldering

Mildly activated rosin fluxes are preferred. The terminations are suitable for re-flow soldering systems. If hand soldering cannot be avoided, the preferred technique is the utilization of hot air soldering tools.

Note.

If wave soldering is used ,there will be some risk.

Re-flow soldering temperatures below 240 degrees, there will be non-wetting risk

### 6-2.1 Lead Free Solder re-flow:

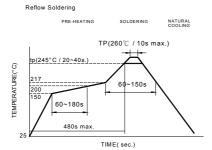
Recommended temperature profiles for lead free re-flow soldering in Figure 1. (Refered to J-STD-020C)

TBM01-150600879 P5.

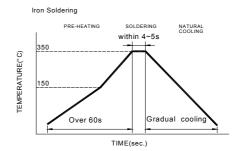
### 6-2.2 Soldering Iron:

Products attachment with a soldering iron is discouraged due to the inherent process control limitations. If a soldering iron must be employed the following precautions are recommended. for Iron Soldering in Figure 2.

- Preheat circuit and products to 150°C
  350°C tip temperature (max)
- Never contact the ceramic with the iron tip
- Use a 20 watt soldering iron with tip diameter of 1.0mm
  Limit soldering time to 4~5sec.
- 1.0mm tip diameter (max)



Reflow times: 3 times max Fig.1

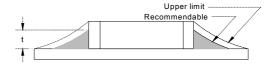


Iron Soldering times: 1 times max Fig.2

### 6-2.3 Solder Volume:

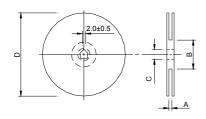
Accordingly increasing the solder volume, the mechanical stress to product is also increased. Exceeding solder volume may cause the failure of mechanical or electrical performance. Solder shall be used not to be exceed as shown in right side:

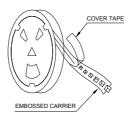
Minimum fillet height = soldering thickness + 25% product height



### 7. Packaging Information

#### 7-1. Reel Dimension

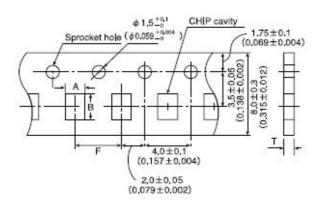




Туре	A(mm)	B(mm)	C(mm)	D(mm)
7"x8mm	10±1.5	50 or more	13±0.2	178±2.0

### 7-2 Tape Dimension / 8mm

■Material of taping is paper



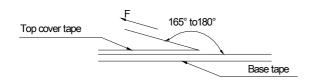
Size	A(mm)	B(mm)	F(mm)	T(mm)
160809	1.0±0.2	1.8±0.2	4.0±0.1	1.1 max

**TAI-TECH TBM01-150600879** P6.

### 7-3. Packaging Quantity

Chip size	160809
Reel	4000
Inner box	20000
Middle box	100000
Carton	200000

### 7-4. Tearing Off Force



The force for tearing off cover tape is 15 to 60 grams in the arrow direction under the following conditions.

Room Temp.	om Temp. Room Humidity		Tearing Speed	
(℃)	(%)	(hPa)	mm/min	
5~35	45~85	860~1060	300	

### **Application Notice**

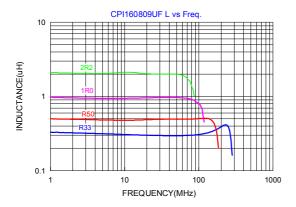
• Storage Conditions(component level)

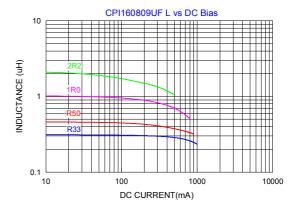
To maintain the solder ability of terminal electrodes:

- 1. TAI-TECH products meet IPC/JEDEC J-STD-020D standard-MSL, level 1.
- 3. Recommended products should be used within 12 months from the time of delivery.
- 4. The packaging material should be kept where no chlorine or sulfur exists in the air.
- Transportation
  - 1. Products should be handled with care to avoid damage or contamination from perspiration and skin oils.
  - 2. The use of tweezers or vacuum pick up is strongly recommended for individual components.
  - 3. Bulk handling should ensure that abrasion and mechanical shock are minimized.

TAI-TECH TBM01-150600879 ₽7.

## Typical Inductance v.s. Frequency Curve







**Test Report** 

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以下測試樣品係由申請廠商所提供及確認 (The following sample(s) was/were submitted and identified by/on behalf of the applicant as):

樣品名稱(Sample Description)

: FERRITE CHIP BEAD INDUCTOR ARRAY MCF MCM YMV SERIES

樣品型號(Style/Item No.)

: FERRITE CHIP BEAD INDUCTOR ARRAY MCF MCM YMV SERIES

收件日期(Sample Receiving Date)

: 2014/12/17

測試期間(Testing Period)

: 2014/12/17 TO 2014/12/23

測試結果(Test Results) : 請見下一頁 (Please

請見下一頁 (Please refer to next pages).

Troy Chang Manager Tech Signed for and on Denality SGS TAIWAN LTD. Chemical Laboratory – Taipel

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### 測試結果(Test Results)

測試部位(PART NAME)No.1

整體混測 (MIXED ALL PARTS)

測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限値 (MDL)	結果 (Result) No.1
鍋 / Cadmium (Cd)	Yest Items	2	n.d.	
鉛 / Lead (Pb)	mg/kg	漿原子發射光譜儀檢測./With reference to IEC 62321-5: 2013 and performed by	2	n.d.
汞 / Mercury (Hg)	mg/kg	漿原子發射光譜儀檢測. / With reference to IEC 62321-4: 2013 and performed by	2	n.d.
六價鉻 / Hexavalent Chromium Cr(VI)	mg/kg	/ With reference to IEC 62321: 2008 and	2	n.d.
皴 / Beryllium (Be)	mg/kg	1	2	n.d.
绨 / Antimony (Sb)	mg/kg	參考US EPA 3050B方法,以感應耦合電漿原 子發射光譜儀檢測./With reference to US EPA Method 3050B. Analysis was performed by ICP-AES.	2	n.d.

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測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限値 (MDL)	結果 (Result) No.1
六溴環十二烷及所有主要被辨别出的 異構物 / Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified (α- HBCDD, β- HBCDD, γ- HBCDD) (CAS No.: 25637-99-4 and 3194-55-6 (134237-51-7, 134237-50-6,	mg/kg	參考IEC 62321: 2008方法,以氣相層析/質 譜儀檢測. / With reference to IEC 62321: 2008 method. Analysis was performed by GC/MS.	5	n.d.
134237-52-8)) 全氟辛烷磺酸 / Perfluorooctane sulfonates (PFOS-Acid, Metal Salt, Amide)	mg/kg	参考US EPA 3550C: 2007方法,以液相層析/ 質譜儀檢測./With reference to US EPA 3550C: 2007. Analysis was performed by LC/MS.	10	n.d.
全氟辛酸 / PFOA (CAS No.: 335-67- 1)	mg/kg	参考US EPA 3550C: 2007方法,以液相層析/ 質譜儀檢測. / With reference to US EPA 3550C: 2007. Analysis was performed by LC/MS.	10	n.d.
鄰苯二甲酸丁苯甲酯 / BBP (Butyl Benzyl phthalate) (CAS No.: 85- 68-7)	%	參考EN 14372, 以氣相層析/質譜儀檢測./ With reference to EN 14372. Analysis was performed by GC/MS.	0.003	n.d.
鄰苯二甲酸二 (2-乙基己基)酯 / DEHP (Di- (2-ethylhexyl) phthalate) (CAS No.: 117-81-7)	%	参考EN 14372, 以氣相層析/質譜儀檢測./ With reference to EN 14372. Analysis was performed by GC/MS.	0.003	n.d.
鄰苯二甲酸二異癸酯 / DIDP (Di- isodecyl phthalate) (CAS No.: 26761-40-0; 68515-49-1)	%	参考EN 14372, 以氣相層析/質譜儀檢測./ With reference to EN 14372. Analysis was performed by GC/MS.	0.01	n.d.
鄰苯二甲酸二異壬酯 / DINP (Di- isononyl phthalate) (CAS No.: 28553-12-0; 68515-48-0)	%	参考EN 14372, 以氣相層析/質譜儀檢測./ With reference to EN 14372. Analysis was performed by GC/MS.	0.01	n.d.

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測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限値 (MDL)	結果 (Result)
鄰苯二甲酸二正辛酯 / DNOP (Di-n-octyl phthalate) (CAS No.: 117-84-0)	%	参考EN 14372, 以氣相層析/質譜儀檢測./ With reference to EN 14372. Analysis was performed by GC/MS.	0.003	No.1 n.d.
鄰苯二甲酸二丁酯 / DBP (Dibutyl phthalate) (CAS No.: 84-74-2)	%	参考EN 14372, 以氣相層析/質譜儀檢測./ With reference to EN 14372. Analysis was performed by GC/MS.	0.003	n.d.
鄰苯二甲酸二異丁酯 / DIBP (Di- isobutyl phthalate) (CAS No.: 84- 69-5)	%	参考EN 14372, 以氣相層析/質譜儀檢測./ With reference to EN 14372. Analysis was performed by GC/MS.	0.003	n.d.
鹵素 / Halogen			-	
鹵素(氟)/ Halogen-Fluorine (F) (CAS No.: 14762-94-8)	mg/kg		50	n.d.
鹵素(氣)/ Halogen-Chlorine (Cl) (CAS No.: 22537-15-1)	mg/kg	參考BS EN 14582:2007,以離子層析儀分析。	50	n.d.
鹵素(溴)/ Halogen-Bromine (Br) (CAS No.: 10097-32-2)	mg/kg	/ With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.
鹵素(碘)/ Halogen-Iodine (I) (CAS No.: 14362-44-8)	mg/kg		50	n.d.

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# **Test Report**

西北臺慶科技股份有限公司 / TAI-TECH ADVANCED ELECTRONICS CO., LTD.

(臺慶精密電子(昆山)有限公司 / TAI-TECH ADVANCED ELECTRONICS (KUN-SHAN) CO. LTD.)

(耀鑽科技股份有限公司 / YOSONIC TECHNOLOGY CO., LTD.)

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(桃園縣中壢市中壢工業區長春六路15號 / NO. 15, CHANGCHUN 6TH RD., JHONGLI CITY, TAOYUAN COUNTY 320, TAIWAN)

測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限値	結果 (Result)
(lest Items)	(UBIE)	(method)	(MDL)	No.1
多溴聯苯總和 / Sum of PBBs	mg/kg	參考IEC 62321: 2008方法, 以氣相層析/質 譜儀檢測. / With reference to IEC 62321: 2008 and performed by GC/MS.	-	n.d.
一溴聯苯 / Monobromobiphenyl	mg/kg		5	n.d.
二溴聯苯 / Dibromobiphenyl	mg/kg		5	n.d.
三溴聯苯 / Tribromobiphenyl	mg/kg		5	n.d.
四溴聯苯 / Tetrabromobiphenyl	mg/kg		5	n.d.
五溴聯苯 / Pentabromobiphenyl	mg/kg		5	n.d.
六溴聯苯 / Hexabromobiphenyl	mg/kg		5	n.d.
七溴聯苯 / Heptabromobiphenyl	mg/kg		5	n.d.
へ溴聯苯 / Octabromobiphenyl	mg/kg		5	n.d.
九溴聯苯 / Nonabromobiphenyl	mg/kg		5	n.d.
十溴聯苯 / Decabromobiphenyl	mg/kg		5	n.d.
多溴聯苯醚總和 / Sum of PBDEs	mg/kg		<u>-</u>	n.d.
一溴聯苯醚 / Monobromodiphenyl ether	mg/kg		5	n.d.
二溴聯苯醚 / Dibromodiphenyl ether	mg/kg		5	n.d.
三溴聯苯醚 / Tribromodiphenyl ether	mg/kg		5	n.d.
四溴聯苯醚 / Tetrabromodiphenyl ether	mg/kg		5	n.d.
五溴聯苯醚 / Pentabromodiphenyl ether	mg/kg		5	n.d.
六溴聯苯醚 / Hexabromodiphenyl ether	mg/kg		5	n.d.
七溴聯苯醚 / Heptabromodiphenyl ether	mg/kg		5	n.d.
八溴聯苯醚 / Octabromodiphenyl ether	mg/kg		5	n.d.
九溴聯苯醚 / Nonabromodiphenyl ether	mg/kg		5	n.d.
十溴聯苯醚 / Decabromodiphenyl ether	mg/kg		5	n.d.

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### 備註(Note):

- 1. mg/kg = ppm ; 0.1wt% = 1000ppm
- 2. n.d. = Not Detected (未檢出)
- 3. MDL = Method Detection Limit (方法偵測極限值)
- 4. "-" = Not Regulated (無規格値)
- 5. 樣品的測試是基於申請人要求混合測試,報告中的混合測試結果不代表其中個别單一材質的含量. (The samples was/were analyzed on behalf of the applicant as mixing sample in one testing. The above results was/were only given as the informality value.)

### PFOS参考資訊(Reference Information): 持久性有機污染物 POPs - (EU) 757/2010

PFOS濃度在物質或製備中不得超過0.001%(10ppm),在半成品、成品或零部件中不得超過0.1%(1000ppm),在紡織品或 塗層材料中不得超過 $1ug/m^2$ 。

(Outlawing PFOS as substances or preparations in concentrations above 0.001% (10ppm), in semi-finished products or articles or parts at a level above 0.1%(1000ppm), in textiles or other coated materials above  $1\mu g/m^2$ .)

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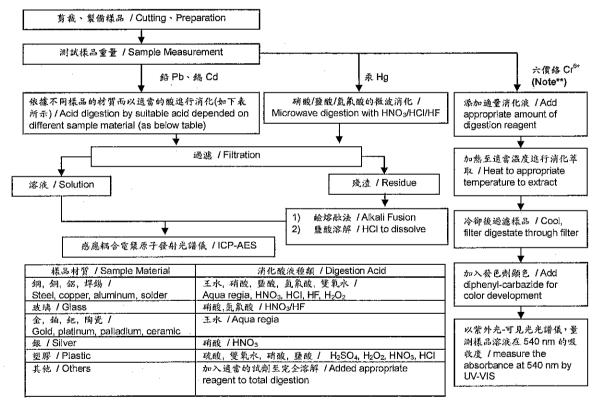
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- 1) 根據以下的流程圖之條件,樣品已完全溶解。( 六價鉻測試方法除外) / These samples were dissolved totally by pre-conditioning method according to below flow chart. ( Cr<sup>6\*</sup> test method excluded )
- 2) 測試人員:楊登偉 / Name of the person who made measurement: Climbgreat Yang
- 3) 測試負責人:張啓興 / Name of the person in charge of measurement: Troy Chang



Note\*\*:(1) 針對非金屬材料加入鹼性消化液,加熱至 90~95℃ 萃取. / For non-metallic material, add alkaline digestion reagent and heat to 90~95℃.

(2) 針對金屬材料加入純水,加熱至沸騰萃取. / For metallic material, add pure water and heat to boiling.

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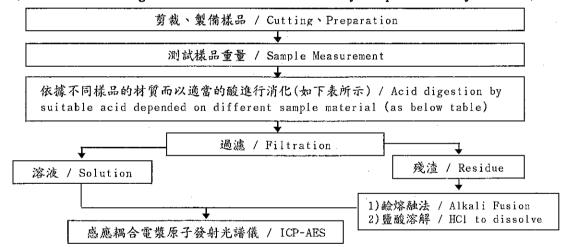
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- 1) 根據以下的流程圖之條件,樣品已完全溶解。 / These samples were dissolved totally by pre-conditioning method according to below flow chart.
- 2) 測試人員:楊登偉 / Name of the person who made measurement: Climbgreat Yang
- 3) 測試負責人:張啓興 / Name of the person in charge of measurement: Troy Chang

### 元素以 ICP-AES 分析的消化流程圖

(Flow Chart of digestion for the elements analysis performed by ICP-AES)



鋼,銅,鋁,焊錫 / Steel, copper, aluminum, solder	王水,硝酸,鹽酸,氫氟酸,雙氧水 /
	Aqua regia, HNO3, HC1, HF, H2O2
玻璃 / Glass	硝酸,氫氟酸 / HNOs/HF
金,鉑,鈀,陶瓷 / Gold, platinum, palladium, ceramic	王水 / Aqua_regia
銀 / Silver	硝酸 / HNO3
塑膠 / Plastic	硫酸,雙氧水,硝酸,鹽酸 / HaSOa, HaOa, HNOa, HCl
其他 / Others	加入適當的試劑至完全溶解 / Added appropriate
	reagent to total digestion

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### 全氣辛酸/全氣辛烷磺酸分析流程圖 / PFOA/PFOS analytical flow chart

- 測試人員: 翁賜彬 / Name of the person who made measurement; Roman Wong
- 測試負責人:張啓興 / Name of the person in charge of measurement: Troy Chang

樣品前處理 / Sample pretreatment

超音波萃取法萃取 / Sample extraction by Ultrasonic extraction (参考方法 Reference method: US EPA 3550C)

萃取液稀釋/濃縮 / Concentrate/Dilute Extracted solution

以液相層析質譜儀分析萃取液 / Analysis was performed by LC/MS

數據 / Data

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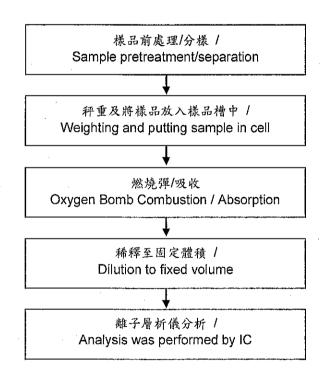
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### 鹵素分析流程圖 / Analytical flow chart of halogen content

- 測試人員: 陳恩臻 / Name of the person who made measurement: Rita Chen
- 測試負責人:張啓興 / Name of the person in charge of measurement: Troy Chang



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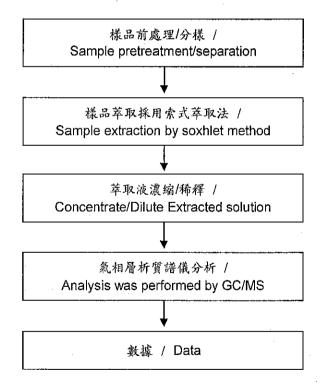
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### 可塑劑分析流程圖 / Analytical flow chart of phthalate content

- 測試人員:翁賜彬 / Name of the person who made measurement: Roman Wong
- 測試負責人:張啓興 / Name of the person in charge of measurement: Troy Chang



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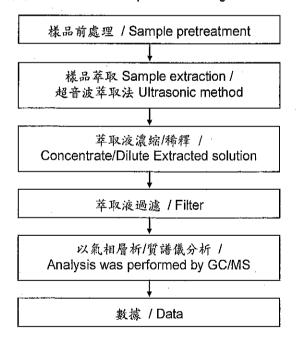
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### 六溴環十二烷分析流程圖 / HBCDD analytical flow chart

- 測試人員:翁賜彬 / Name of the person who made measurement: Roman Wong
- 測試負責人:張啓興 / Name of the person in charge of measurement: Troy Chang



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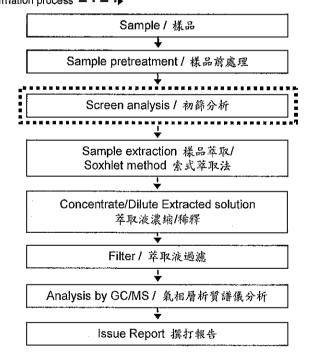
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### 多溴聯苯/多溴聯苯醚分析流程圖 / PBB/PBDE analytical FLOW CHART

- 測試人員:翁賜彬 / Name of the person who made measurement: Roman Wong
- 測試負責人:張啓興 / Name of the person in charge of measurement: Troy Chang

確認程序 / Confirmation process — - - - ▶



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(臺慶精密電子(昆山)有限公司 / TAI-TECH ADVANCED ELECTRONICS (KUN-SHAN) CO. LTD.)

(耀鑽科技股份有限公司 / YOSONIC TECHNOLOGY CO., LTD.)

桃園縣楊梅市幼獅工業區幼四路1號 (NO. 1, YOU 4TH ROAD, YOUTH INDUSTRIAL DISTRICT, YANG-MEI CITY, TAO-YUAN HSIEN. TAIWAN R. O. C.)

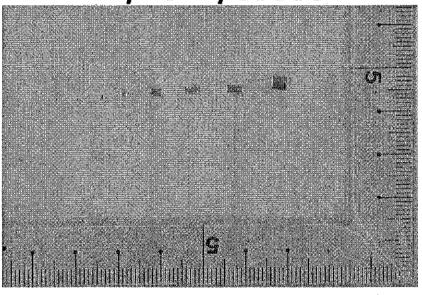
(江蘇省昆山市篷朗昆嘉高科技工業區郭澤路 / GUO-ZE ROAD, KUNJIA HI-TECH INDUSTRIAL PARK, KUN-SHAN, JIANG-SU, CHINA)

(桃園縣中壢市中壢工業區長春六路15號 / NO. 15, CHANGCHUN 6TH RD., JHONGLI CITY, TAOYUAN COUNTY 320, TAIWAN)

\* 照片中如有箭頭標示,則表示爲實際檢測之樣品/部位. \*

(The tested sample / part is marked by an arrow if it's shown on the photo.)

CE/2014/C3338



\*\* 報告結尾 (End of Report) \*\*

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