



## FOR APPROVAL

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Please return to us one cop with your authorized signatures as approved.

CUSTOMER : 晶睿通訊股份有限公司

DESCRIPTION : Sealed Choke Coil PHT041H type

PART NUMBER : PHT041H-4R7MS

BRAND : 乾坤科技

ISSUE DATE : May,8 , 2015

料件編號	350035400G
品名	
規格	
Approved Date	
Approved Signature	
Issued	

**PH041H-XXXMS-63 Sealed Choke Coil**

1. Features

Low profile : 3.8mm x 3.8mm x 1.8mm

Low coil resistance with large currents.

High magnetic shield construction should actualize high resolution for EMC protection.

100% lead (Pb) free meet RoHS standard

2. Application

Cellular phones, LCD displays, HDDs, DVCs, DSCs, PDAs etc..

3. Type Designation

PH    041H   -   XXX    M    S    -   XX  
 (1)    (2)    (3)    (4)    (5)    (6)

Where (1) Series No :

(2) Size :

041H = 3.8mm x 3.8mm x 1.8mm

(3) Inductance Value :

4R7 = 4.7μH

(4) Tolerance :

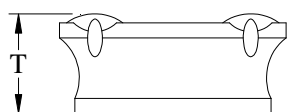
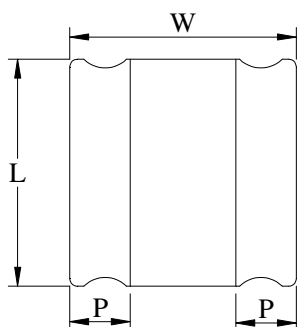
M = ± 20%

(5) Materials :

S = S type

(6) 63 : Internal Code

4. Outline Dimensions



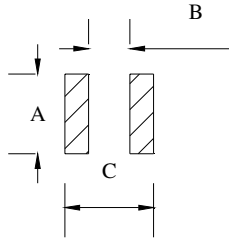
Code	Dimensions (mm)
L	3.8 ± 0.2*
W	3.8 ± 0.2*
T	1.8 max. *
P	1.0 ± 0.2

\* Dimensions are of the case not including the termination. For maximum overall dimensions including the termination, add 0.1mm.

Note: This graph is only regard to dimensions spec. For outer appearance, please refer to actual product.

### 5. Recommend Land Pattern Dimensions

The customer shall determine the land dimensions shown above after confirming and safety.



A	3.8
B	1.8
C	3.8

Unit : mm

### 6. Specifications

Part Number	L0 Inductance ( $\mu\text{H}$ ) @ (0A)	$R_{dc}$ ( $\text{m}\Omega$ )		Heat Rating Current DC AmPH. Idc ( A )		Saturation Current DC AmPH. Isat ( A )	
		Typical	Maximum	Typical	Maximum	Typical	Maximum
PH041H-R56MS-63	0.56	17	22	5.4	4.86	5.5	4.95
PH041H-1R0MS-63	1.0	20	25	3.8	3.42	3.8	3.42
PH041H-1R2MS-63	1.2	25	30	3.6	3.24	3.6	3.24
PH041H-1R5MS-63	1.5	33	40	3.2	2.88	3.5	3.15
PH041H-1R8MS-63	1.8	34	41	3.1	2.79	3.1	2.79
PH041H-2R2MS-63	2.2	35	45	3.0	2.70	3.0	2.70
PH041H-3R3MS-63	3.3	45	56	2.7	2.43	2.4	2.16
PH041H-4R7MS-63	4.7	70	90	2.2	1.98	2.0	1.80
PH041H-6R8MS-63	6.8	90	115	1.9	1.71	1.5	1.35
PH041H-8R2MS-63	8.2	105	132	1.4	1.26	1.4	1.26
PH041H-100MS-63	10.0	135	170	1.3	1.17	1.3	1.17
PH041H-150MS-63	15.0	185	222	1.25	1.12	1.0	0.90
PH041H-220MS-63	22.0	250	315	1.2	1.08	0.83	0.74
PH041H-330MS-63	33.0	405	486	0.9	0.81	0.68	0.61
PH041H-470MS-63	47.0	495	594	0.8	0.72	0.56	0.50
PH041H-680MS-63	68.0	885	1,062	0.58	0.52	0.48	0.43
PH041H-101MS-63	100.0	1,545	1,854	0.42	0.37	0.45	0.40
PH041H-221MS-63	220.0	3,150	3,780	0.30	0.27	0.33	0.30
PH041H-331MS-63	330.0	4,200	5,040	0.27	0.24	0.25	0.22

\* : If you require another part number please contact with us.

\*\* : Inductance Tolerance  $\pm 20\%$

Note 1. : All test data is referenced to 25°C ambient.

Note 2. : Idc : DC current (A) that will cause an approximate  $\Delta T$  of 40°C

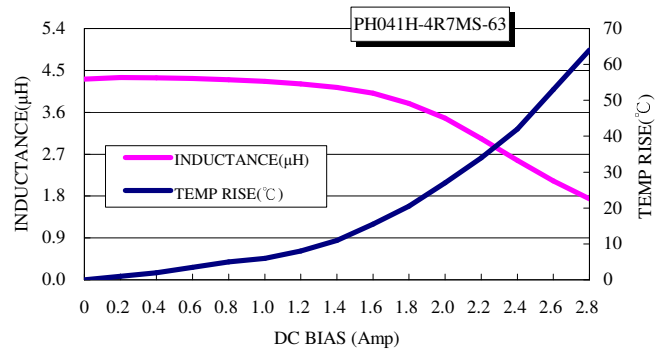
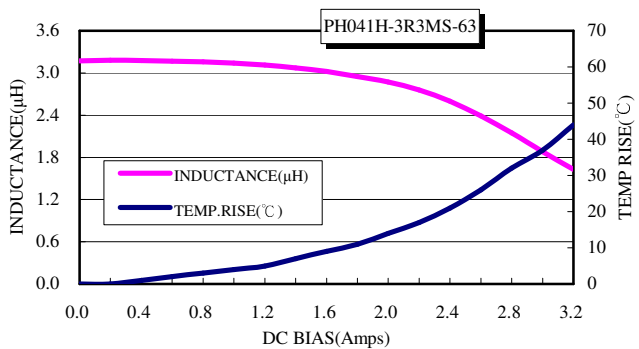
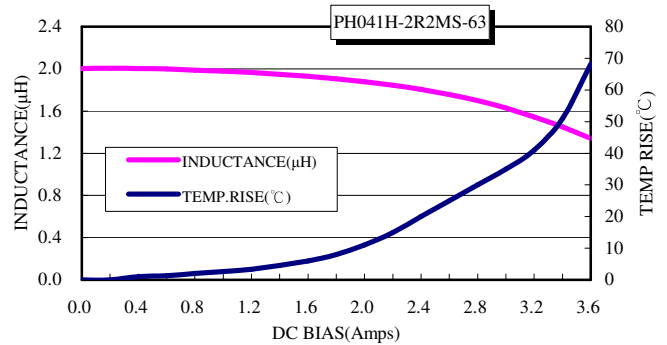
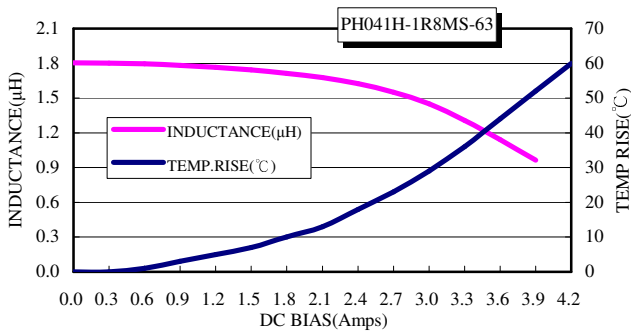
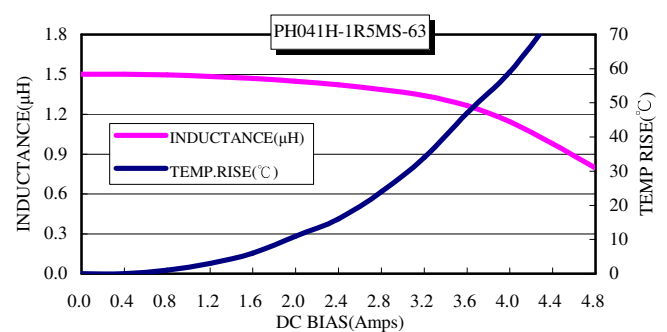
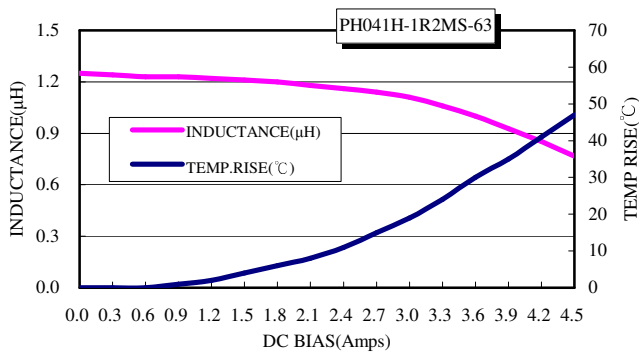
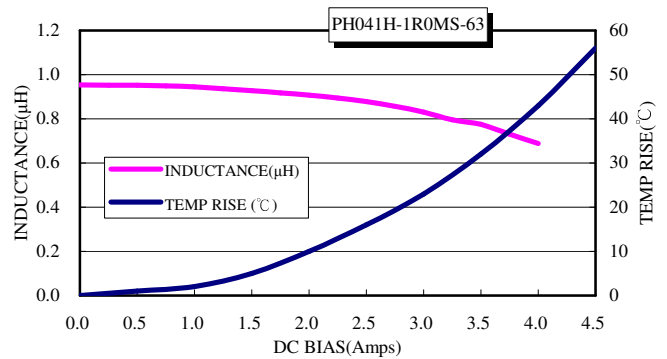
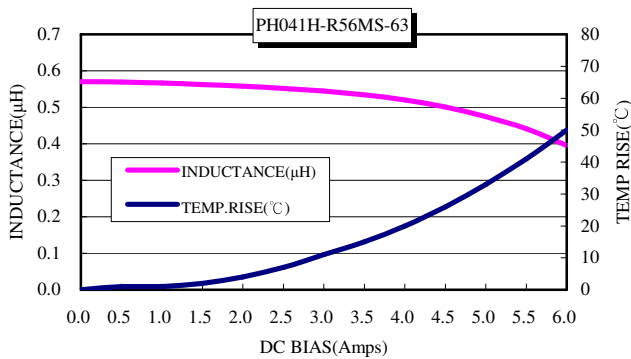
Note 3. : Isat : DC current (A) that will cause Lo to drop approximately 30%

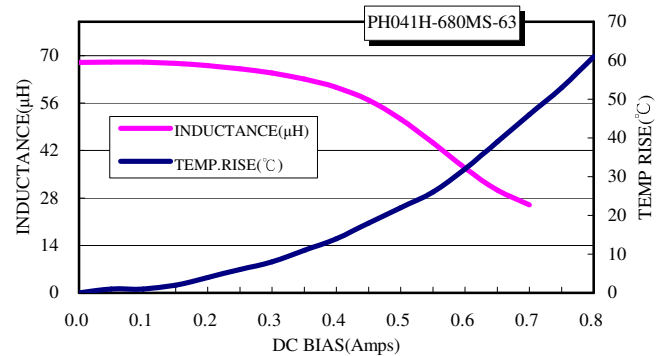
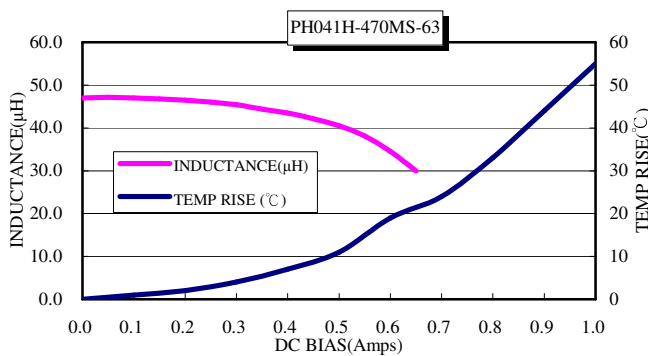
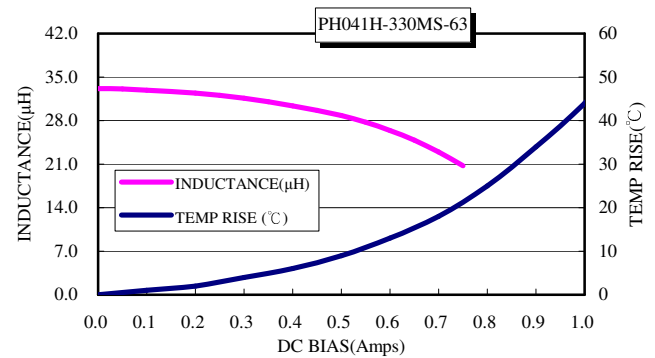
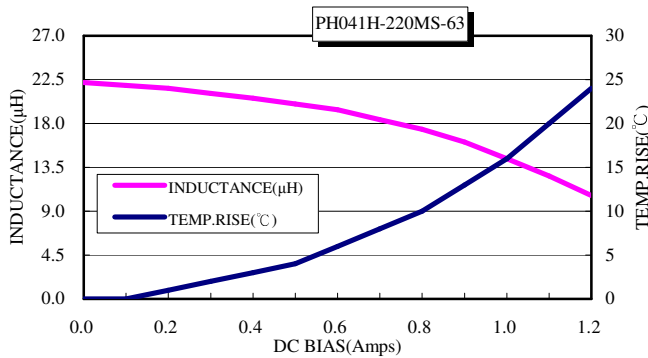
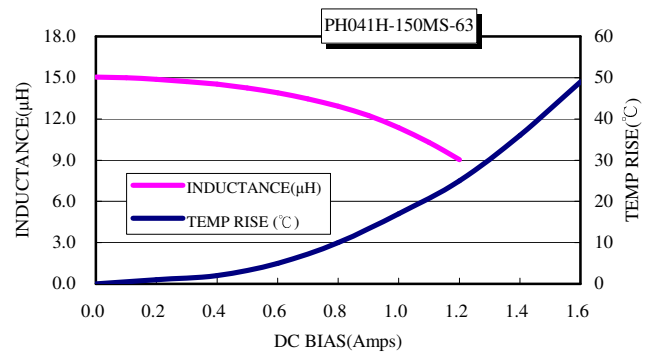
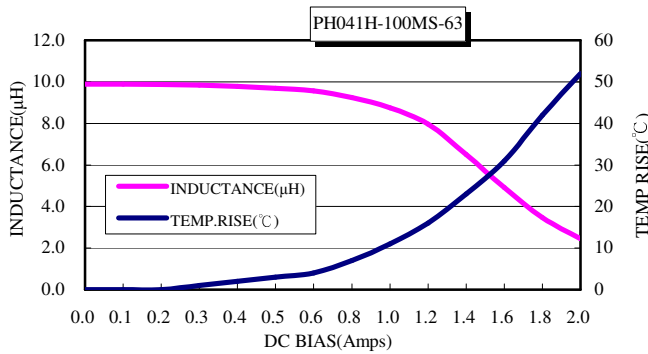
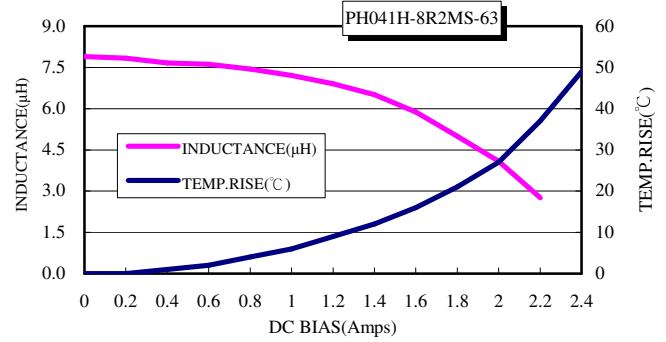
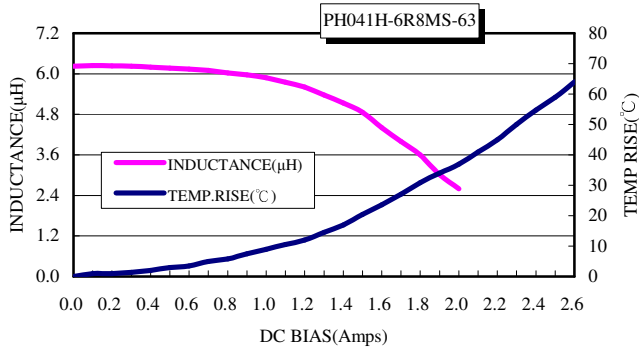
Note 4. : Operating Temperature Range -55°C to + 125°C

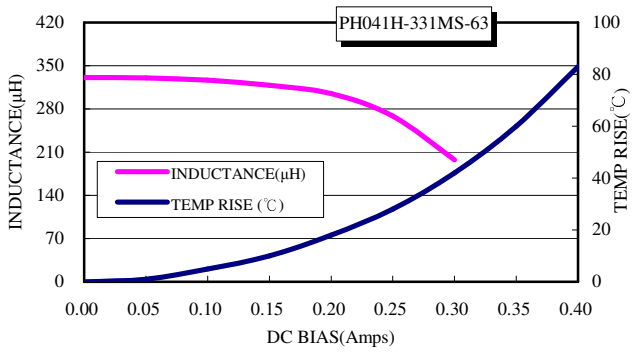
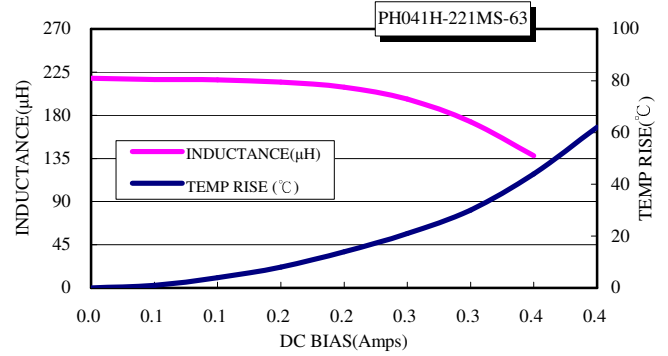
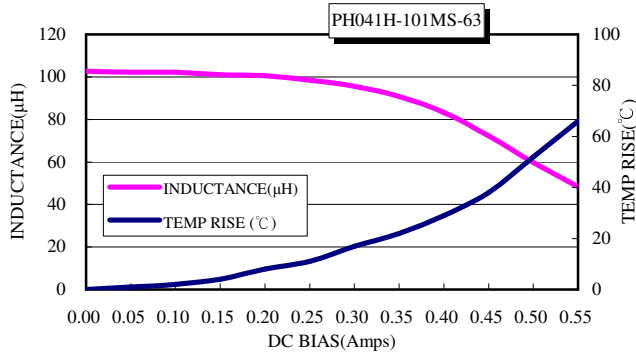
Note 5. : The part temperature (ambient + temp rise ) should not exceed 125°C under worse case operating conditions. Circuit design , component placement, PWB trace size and thickness, airflow and other cooling provision all affect the part temperature. Part temperature should be verified in the end application.

Note 6. : The rated current as listed is either the saturation current or the heating current depending on which value is lower.

### 6-1 Current Characteristic







Test Instruments

Wayne kerr 3260B/G LCR Meter

Wayne kerr 3265B Bias Current Source

Test Condition

Temperature :  $26 \pm 3^{\circ}\text{C}$  , Humidity :  $< 70\% \text{ RH}$

Frequency : 100KHz , 1.0V

7. Reliability

7-1 Mechanical

Item	Specification and Requirement	Test Method
Solderability	The surface of terminal immersed shall be minimum of 95% covered with a new coating of solder	Solder heat proof : (1) Preheating : $160 \pm 10^{\circ}\text{C}$ 90seconds (2) Retention time : $245 \pm 5^{\circ}\text{C}$ for $2 \pm 0.5$ seconds
Vibration	Inductance change : Within $\pm 10\%$ Without mechanical damage such as break	(1) Vibration frequency : ( 10Hz to 55Hz to 10Hz ) in 60 seconds as a period (2) Vibration time : period cycled for 2 hours in each of 3 mutual perpendicular directions (3) Amplitude : 1.5mm <sub>max.</sub>
Shock	Inductance change : Within $\pm 10\%$ Without mechanical damage such as break	(1) Peak value : 100G (2) Duration of pulse : 11ms (3) 3 times in each positive and negative direction of 3 mutual perpendicular directions

7-2 Endurance

Item	Specification and Requirement	Test Method
Thermal Shock	Inductance change : Within $\pm 10\%$ Without distinct damage in appearance	(1) Repeat 100 cycle as follow : (-55 $\pm 2^{\circ}\text{C}$ , 30 $\pm 3$ minutes) $\rightarrow$ (Room temperature, 5 minutes) $\rightarrow$ (+125 $\pm 2^{\circ}\text{C}$ , 30 $\pm 3$ minutes) $\rightarrow$ (Room temperature, 5 minutes) (2) Recovery : 48 + 4 / - 0 hours of recovery under the standard condition after the test. ( See Note1 )
High Temperature resistance	Inductance change : Within $\pm 10\%$ Without distinct damage in appearance	(1) Environment condition : 85 $\pm 2^{\circ}\text{C}$ Applied Current : Rated current (2) Duration : 1,000 + 4 / - 0 hours ( See Note1 )
Humidity resistance	Inductance change : Within $\pm 10\%$ Without distinct damage in appearance	(1) Environment condition : 60 $\pm 2^{\circ}\text{C}$ Humidity : 90~95% Applied Current : Rated current (2) Duration : 1,000 + 4 / - 0 hours ( See Note1 )
Low Temperature Store	Inductance change : Within $\pm 10\%$ Without distinct damage in appearance	(1) Store temperature : -55 $\pm 2^{\circ}\text{C}$ for total 1,000 + 4 / - 0 hours
High Temperature Store	Inductance change : Within $\pm 10\%$ Without distinct damage in appearance	(1) Store temperature : +125 $\pm 2^{\circ}\text{C}$ for total 1,000 + 4 / - 0 hours

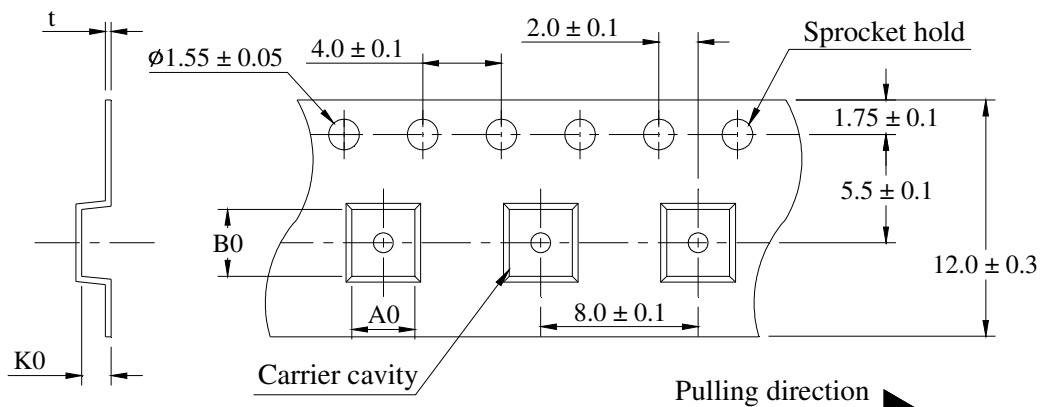
Note1 : When there are questions concerning measurement result : measurement shall be made after 48  $\pm 2$  hours of recovery under the standard condition



8. Packaging

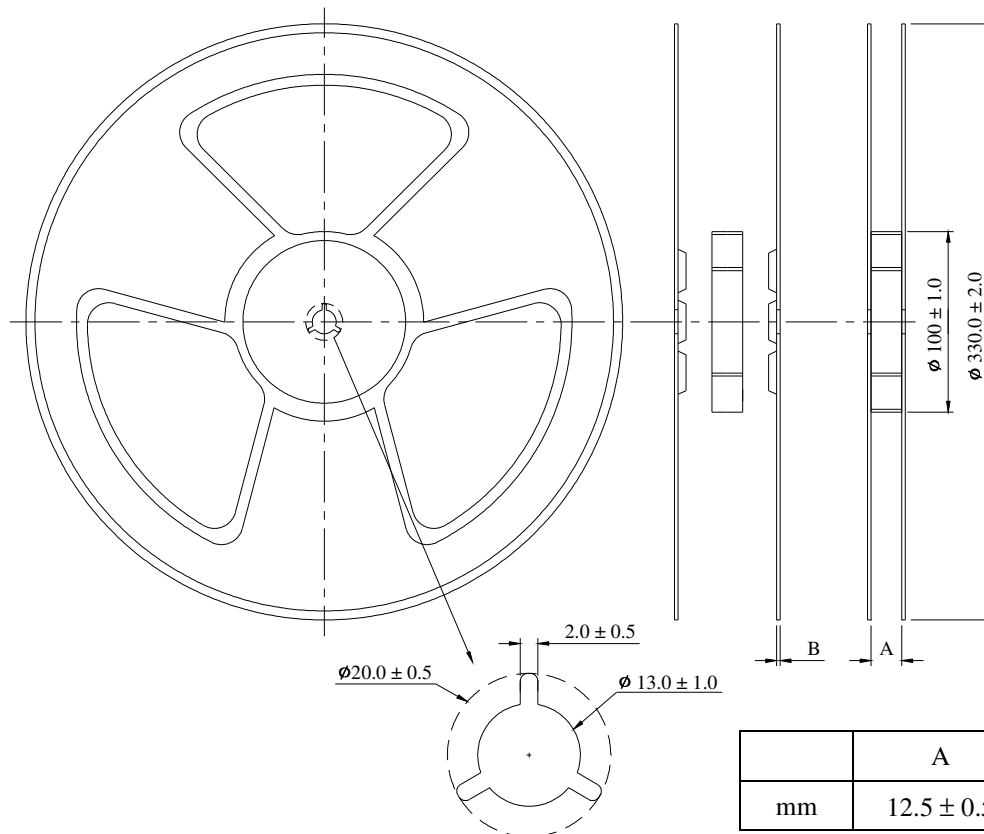
8-1 Dimensions

8-1-1 Tape packaging dimensions



	A0	B0	K0	t
mm	$4.3 \pm 0.1$	$4.4 \pm 0.1$	$2.3 \pm 0.15$	$0.3 \pm 0.05$

8-1-2 Reel dimensions

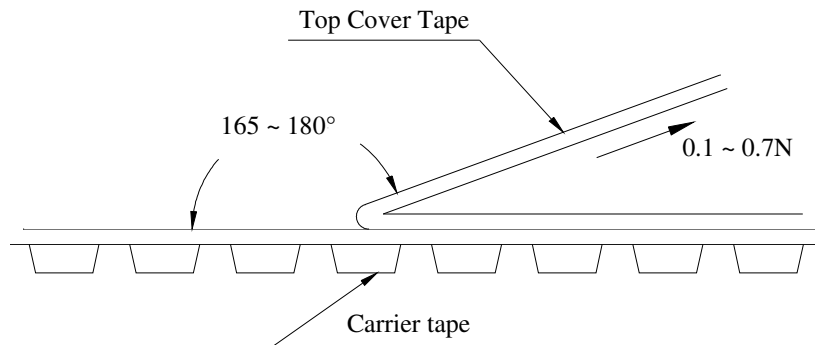


	A	B
mm	$12.5 \pm 0.5$	$2.0 \pm 0.2$

### 8-2 Peel force of top cover tape

The peel speed shall be about 300 mm/minute

The peel force of top cover tape shall be between 0.1 to 0.7 N



### 8-3 Numbers of taping

2,000 pieces/reel

### 8-4 Label marking

The following items shall be marked on the production and shipping Label on the reel.

#### 8-4-1 Production Label

- (1) Part No.
- (2) Description
- (3) Quantity
- (4) Taping No.

#### 8-4-2 Shipping Label

- (1) \* Customer's name
- (2) \* Customer's part No.
- (3) Manufacturer's part No.
- (4) Manufacturer's name
- (5) Manufacturer's country

\* Note : Item (1) and (2) are listed by request

9. Care note

9-1 Care note for Use

(1) Storage Condition :

Temperature 25 to 35°C, Humidity 45 to 85% RH

(2) Use Temperature :

a. Minimum Temperature : -55°C Ambient temperature of power choke coil.

b. Maximum Temperature : +125°C The value of temperature including ambient of the transformer and temperature rise of power choke coil.

c. There is not a problem from -55°C ~ +125°C in a reliability test.

d. However, this is not meant a temperature grade guarantee of UL.

(3) Model :

When this power choke coil was used in a similar or new product to the original one, sometimes it might be unable to satisfy the specifications due to difference of condition of usage.

(4) Drop :

If the power choke coil suffered mechanical stress such as drop, characteristics may become poor ( due to damage on coil bobbin, etc. ).

Never use such stressed power choke coil.

9-2 Care note for Safety

(1) Provision to Abnormal Condition

This power choke coil itself does not have any protective function in abnormal condition such as overload, short-circuit and open-circuit conditions, etc.

Therefore, it shall be confirmed as the end product that there is no risk of smoking, fire, dielectric withstand voltage, insulation resistance, etc. in abnormal conditions to provide protective devices and/or protection circuit in the end product.

(2) Temperature Rise

Temperature rise of power choke coil depends on the installation condition on end products.

It shall be confirmed on the actual end product that temperature rise of power choke coil is in the limit of specified temperature class.

(3) Dielectric Strength

Dielectric withstanding test with higher voltage than specific value will damage insulating material and shorten its life.

(4) Water

This power choke coil must not be used in wet condition by water, coffee or any liquid because insulation strength becomes very low on the condition.

(5) Potting

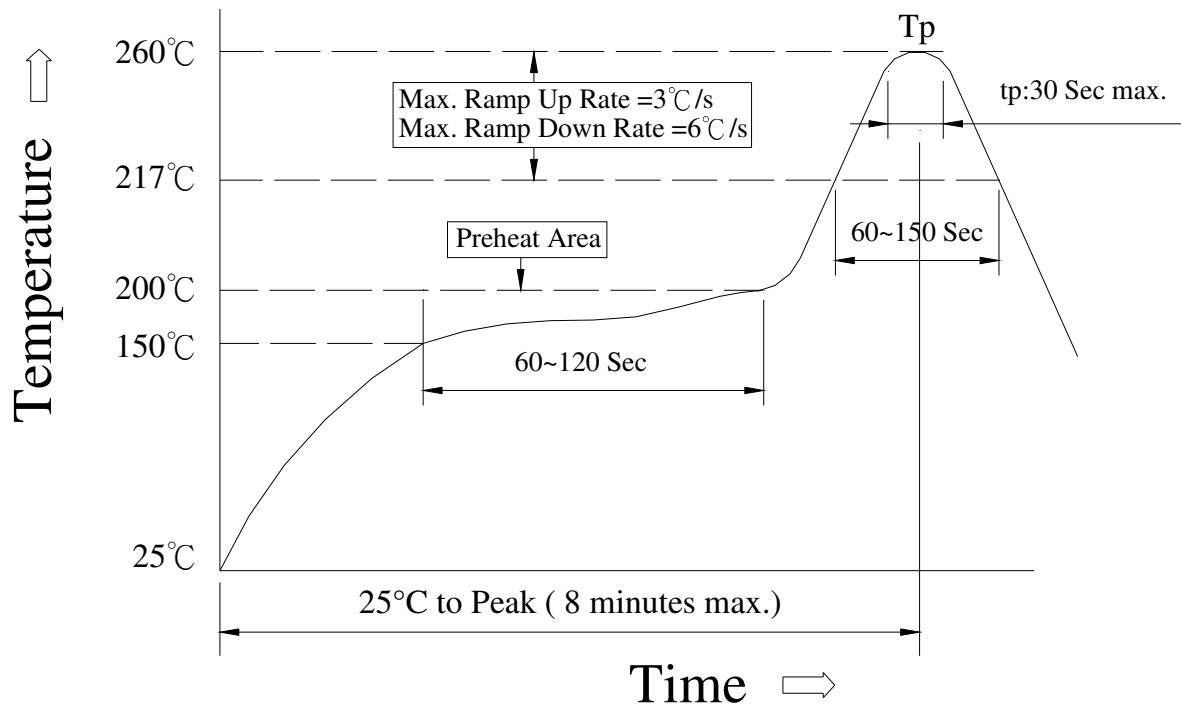
If this power choke coil is potted in some compound, coating material of magnet wire might be occasionally damaged. Please ask us if you intend to pot this power choke coil.

(6) Detergent

Please consult our company once in case of this because the confirmation of reliability etc. is needed when the washing medicine is used for the power choke coil.

Appendix A

Sn plating Reflow Profile



(1) Reflow Soldering Method :

Reflow Soldering	Tp:255~260°C	Max.30 seconds ( tp )
	217°C	60~150 seconds
Pre-Heat	150 ~ 200°C	60~120 seconds
Time 25°C to peak temperature	8 minutes max.	

(2) Soldering iron Method : 350± 5°C max.3 seconds

## 測試報告

## Test Report

號碼(No.) : CE/2015/15516

日期(Date) : 2015/02/04

頁數(Page): 1 of 12

乾坤科技股份有限公司

CYNTEC CO., LTD.

新竹科學工業園區研發二路2號

NO. 2, R&D 2ND. ROAD, SCIENCE-BASED INDUSTRIAL PARK, HSIN-CHU, 300 TAIWAN, R. O. C.



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) :

送樣廠商(Sample Submitted By) : 乾坤科技股份有限公司 (CYNTEC CO., LTD.)  
樣品名稱(Sample Description) : SEALING CHOKE  
樣品型號(Style/Item No.) : PS, PH, PL, PG, PSLT, PMLT, PMLC, DSP\* SERIES  
收件日期(Sample Receiving Date) : 2015/01/29  
測試期間(Testing Period) : 2015/01/29 TO 2015/02/04

### 測試需求(Test Requested) :

- (1) 依據客户要求，参考RoHS 2011/65/EU Annex II 指令進行鎘，鉛，汞，六價鉻，多溴聯苯，多溴聯苯醚測試。  
(As specified by client, with reference to RoHS Directive 2011/65/EU Annex II to determine Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs contents in the submitted sample.)
- (2) 依據客户要求，参考 WTO/TBT 通報 G/TBT/N/EU/256，檢測 DBP, BBP, DEHP, DIBP. (As specified by client, with reference to G/TBT/N/EU/256 of WTO/TBT to test DBP, BBP, DEHP, DIBP.)
- (3) 其他測試項目請見下一頁 . / Please refer to next pages for the other item(s).

測試結果(Test Results) : 請見下一頁 (Please refer to next pages).

  
  
Troy Chang, Manager - Tech  
Signed for and on behalf of  
SGS TAIWAN LTD.  
Chemical Laboratory - Taipei

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# 測試報告

## Test Report

號碼(No.) : CE/2015/15516

日期(Date) : 2015/02/04

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乾坤科技股份有限公司

CYNTEC CO., LTD.

新竹科學工業園區研發二路2號

NO. 2, R&D 2ND. ROAD, SCIENCE-BASED INDUSTRIAL PARK, HSIN-CHU, 300 TAIWAN, R. O. C.



### 測試結果(Test Results)

測試部位(PART NAME)No.1 : SEALING CHOKE

測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限值 (MDL)	結果 (Result)
				No.1
鎘 / Cadmium (Cd)	mg/kg	參考IEC 62321-5: 2013方法, 以感應耦合電漿原子發射光譜儀檢測. / With reference to IEC 62321-5: 2013 and performed by ICP-AES.	2	n.d.
鉛 / Lead (Pb)	mg/kg	參考IEC 62321-5: 2013方法, 以感應耦合電漿原子發射光譜儀檢測. / With reference to IEC 62321-5: 2013 and performed by ICP-AES.	2	n.d.
汞 / Mercury (Hg)	mg/kg	參考IEC 62321-4: 2013方法, 以感應耦合電漿原子發射光譜儀檢測. / With reference to IEC 62321-4: 2013 and performed by ICP-AES.	2	n.d.
六價鉻 / Hexavalent Chromium Cr(VI)	mg/kg	參考IEC 62321: 2008方法, 以UV-VIS檢測. / With reference to IEC 62321: 2008 and performed by UV-VIS.	2	n.d.
銻 / Antimony (Sb)	mg/kg	參考US EPA 3052方法, 以感應耦合電漿原子發射光譜儀檢測. / With reference to US EPA Method 3052. Analysis was performed by ICP-AES.	2	n.d.
鈹 / Beryllium (Be)	mg/kg	參考US EPA 3052方法, 以感應耦合電漿原子發射光譜儀檢測. / With reference to US EPA Method 3052. Analysis was performed by ICP-AES.	2	n.d.

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# 測試報告

# Test Report

號碼(No.) : CE/2015/15516

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頁數(Page): 3 of 12

乾坤科技股份有限公司

CYNTEC CO., LTD.

新竹科學工業園區研發二路2號

NO. 2, R&D 2ND. ROAD, SCIENCE-BASED INDUSTRIAL PARK, HSIN-CHU, 300 TAIWAN, R. O. C.



測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限值 (MDL)	結果 (Result)
				No.1
全氟辛烷磺酸 / Perfluorooctane sulfonates (PFOS-Acid, Metal Salt, Amide)	mg/kg	參考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	參考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)	mg/kg	參考IEC 62321-8 (111/321/CD), 以氣相層析儀/質譜儀檢測之. / With reference to IEC 62321-8 (111/321/CD). Analysis was performed by GC/MS.	50	n.d.
鄰苯二甲酸二丁酯 / DBP (Dibutyl phthalate) (CAS No.: 84-74-2)	mg/kg		50	n.d.
鄰苯二甲酸二(2-乙基己基)酯 / DEHP (Di-(2-ethylhexyl) phthalate) (CAS No.: 117-81-7)	mg/kg		50	n.d.
鄰苯二甲酸二異丁酯 / DIBP (Di-isobutyl phthalate) (CAS No.: 84-69-5)	mg/kg		50	n.d.
鄰苯二甲酸二異癸酯 / DIDP (Di-isodecyl phthalate) (CAS No.: 26761-40-0; 68515-49-1)	mg/kg		50	n.d.
鄰苯二甲酸二異壬酯 / DINP (Di-isononyl phthalate) (CAS No.: 28553-12-0; 68515-48-0)	mg/kg		50	n.d.
鄰苯二甲酸二正辛酯 / DNOP (Di-n-octyl phthalate) (CAS No.: 117-84-0)	mg/kg		50	n.d.

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# 測試報告

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CYNTEC CO., LTD.

新竹科學工業園區研發二路2號

NO. 2, R&D 2ND. ROAD, SCIENCE-BASED INDUSTRIAL PARK, HSIN-CHU, 300 TAIWAN, R. O. C.



測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限值 (MDL)	結果 (Result)
				No.1
<b>多溴聯苯總和 / Sum of PBBs</b>	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.
八溴聯苯 / 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.
<b>多溴聯苯醚總和 / Sum of PBDEs</b>	mg/kg		-	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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測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限值 (MDL)	結果 (Result)
				No.1
鹵素 / Halogen				
鹵素 (氟) / Halogen-Fluorine (F) (CAS No.: 14762-94-8)	mg/kg	參考BS EN 14582:2007, 以離子層析儀分 析. / With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.
鹵素 (氯) / Halogen-Chlorine (Cl) (CAS No.: 22537-15-1)	mg/kg		50	n.d.
鹵素 (溴) / Halogen-Bromine (Br) (CAS No.: 10097-32-2)	mg/kg		50	n.d.
鹵素 (碘) / Halogen-Iodine (I) (CAS No.: 14362-44-8)	mg/kg		50	n.d.

### 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 (無規格值)

### PFOS參考資訊(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1 $\mu$ g/m<sup>2</sup>。

(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<sup>2</sup>.)

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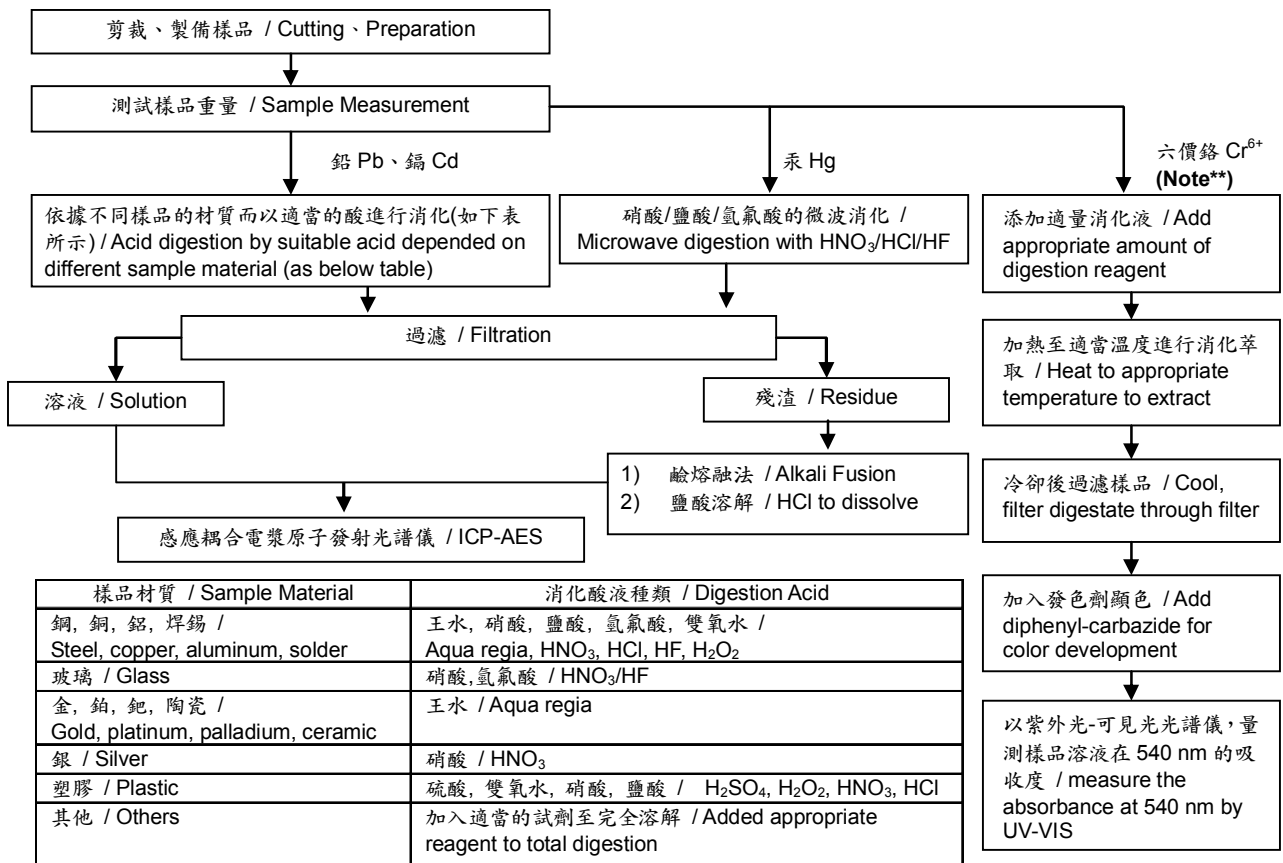
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- 1) 根據以下的流程圖之條件，樣品已完全溶解。(六價鉻測試方法除外) / These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr<sup>6+</sup> test method excluded)
- 2) 測試人員：楊登偉 / Name of the person who made measurement: Climbgreat Yang
-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



### Note\*\* (For IEC 62321)

- (1) 針對非金屬材料加入鹼性消化液，加熱至 90~95°C 萃取。 / For non-metallic material, add alkaline digestion reagent and heat to 90~95°C.
- (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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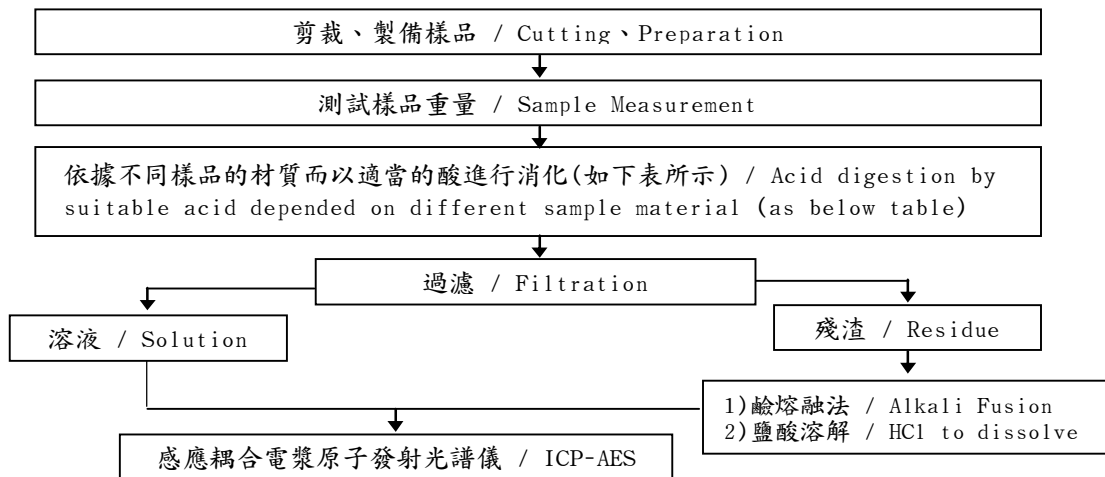
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- 1) 根據以下的流程圖之條件，樣品已完全溶解。 / These samples were dissolved totally by pre-conditioning method according to below flow chart.
- 2) 測試人員：楊登偉 / Name of the person who made measurement: Climbgreat Yang
- 3) 測試負責人：張啓興 / Name of the person in charge of measurement: 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, HNO <sub>3</sub> , HCl, HF, H <sub>2</sub> O <sub>2</sub>
玻璃 / Glass	硝酸, 氫氟酸 / HNO <sub>3</sub> /HF
金, 鉑, 鈀, 陶瓷 / Gold, platinum, palladium, ceramic	王水 / Aqua regia
銀 / Silver	硝酸 / HNO <sub>3</sub>
塑膠 / Plastic	硫酸, 雙氧水, 硝酸, 鹽酸 / H <sub>2</sub> SO <sub>4</sub> , H <sub>2</sub> O <sub>2</sub> , HNO <sub>3</sub> , 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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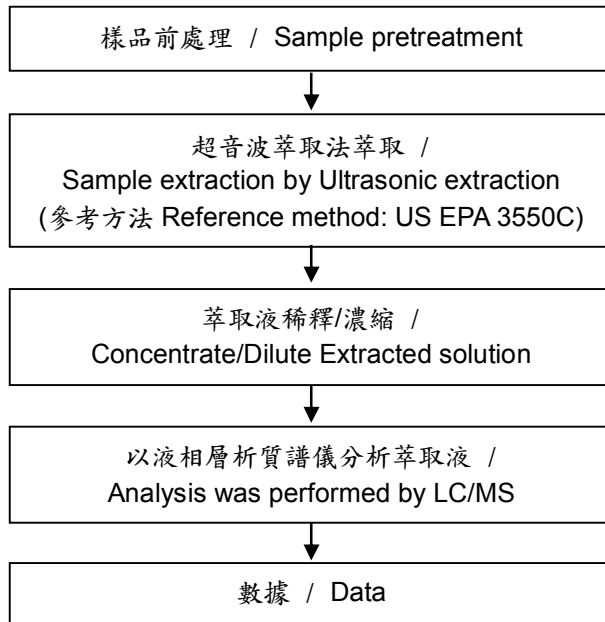
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### 全氟辛酸/全氟辛烷磺酸分析流程圖 / PFOA/PFOS analytical flow chart

- 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



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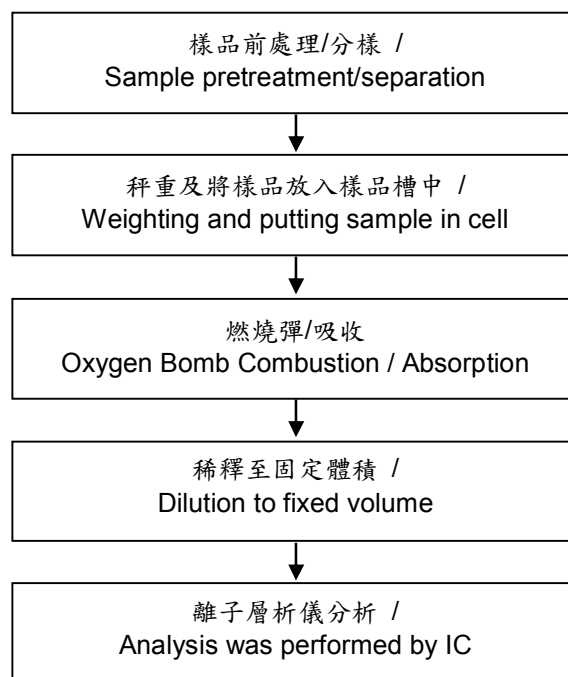
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### 鹵素分析流程圖 / Analytical flow chart of halogen content

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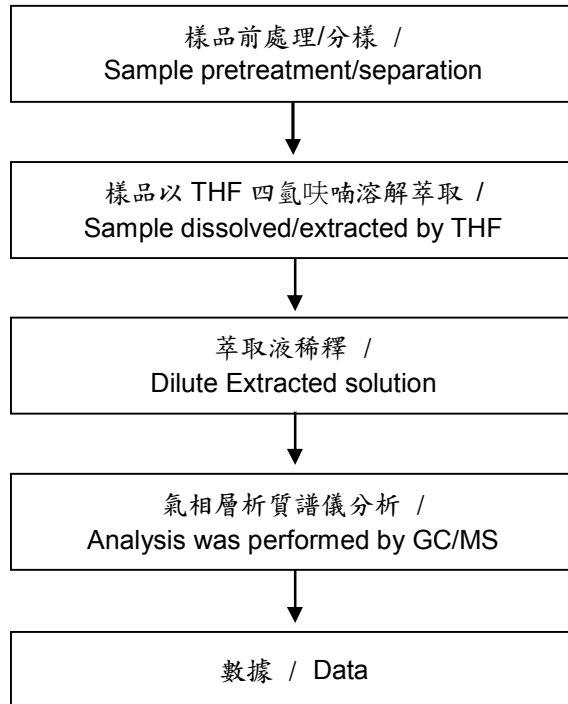
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### 可塑劑分析流程圖 / Analytical flow chart of phthalate content

- 測試人員：徐毓明 / Name of the person who made measurement: Andy Shu
- 測試負責人：張啓興 / Name of the person in charge of measurement: Troy Chang

#### 【測試方法/Test method: IEC 62321-8】



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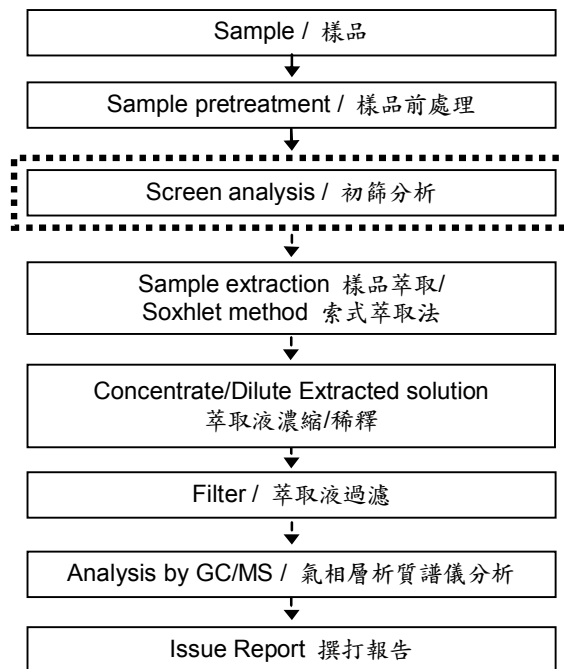
### 多溴聯苯/多溴聯苯醚分析流程圖 / PBB/PBDE analytical FLOW CHART

- 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

初次測試程序 / First testing process —————>

選擇性篩檢程序 / Optional screen process .....>

確認程序 / Confirmation process - - - >



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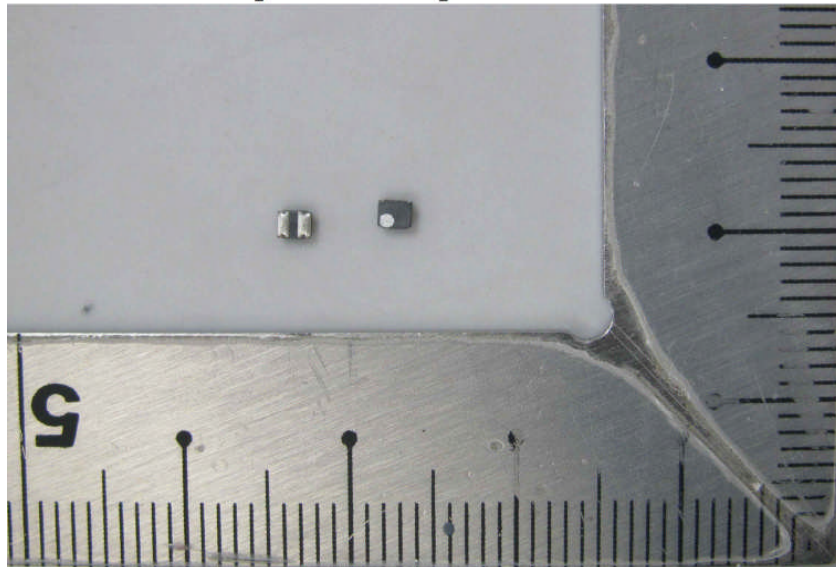
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\* 照片中如有箭頭標示，則表示為實際檢測之樣品/部位。 \*  
(The tested sample / part is marked by an arrow if it's shown on the photo.)

### CE/2015/15516



\*\* 報告結尾 (End of Report) \*\*

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